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ABSTRACT

What was the impact of economic pressures during the crucial three-year period, 1972-1975, on the financial conditions of different types of colleges and universities? The American Council on Education designed a survey instrument to collect financial and enrollment data for the three years in question. The sample of 646 institutions participating in the survey were chosen to approximately represent the entire population of institutions of higher education--private, public, universities, other four-year institutions, and two-year institutions. The overriding conclusion from the study and from earlier evidence is that progressive deterioration has been occurring in the financial condition of higher education as a whole in recent years. Furthermore, the process of decline appears to have accelerated during the past three years under the joint influence of inflation and recession in the national economy. (Author/KE)

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A STUDY OF THE FINANCIAL CONDITION OF COLLEGES AND UNIVERSITIES: 1972-1975

Lyle H. Lanier

Charles J. Andersen

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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I. INTRODUCTION [1,2]

This study was planned in the spring of 1974, partly to update and extend the analysis of "financial distress" among colleges and universities reported by the National Commission on the Financing of Postsecondary Education in December 1973 (18). The National Commission concluded its review of previous studies of the problem with the following comment on the nature and extent of financial distress in higher education:

> "Those who have studied the matter are far from unanimous, however, about the seriousness of the problem and the necessity for governmental intervention. Of special significance is the fact that the literature provides clear evidence that there is not agreement on a uniform definition regarding the nature of financial distress among postsecondary institutions, nor are there generally accepted standards or uniform criteria to ascertain its existence or extent" (18, p. 193).

Despite this unfavorable methodological diagnosis, the National Commission's own statistical analysis had led paradoxically to the following fairly definitive conclusions:

> "Based on the analysis of selected statistical evidence, the financial status of the postsecondary education enterprise is not substantially jeopardizing the achievement of postsecondary education objectives. Some postsecondary institutions, however, are already in financial distress, and, if present patterns and conditions of financing continue, there is a high probability that such distress will occur in several sectors of postsecondary education as well " (18, p. 225).

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[1]This study has been supported by a grant from the Ford Foundation to the American Council on Education.

[2]The assistance of the National Association of College and University Business Officers in securing the cooperation of its members in this study is gratefully acknowledged.

The National Commission nevertheless was not satisfied with the statistical basis for these broad generalizations. Regarding the six classes of evidence assembled on financial distress, it was noted that "the available data are at best incomplete," and that "the data needed to provide conclusive evidence are not available at this time." Considerable discussion was then devoted to needed improvements in the methodology for assessing the financial condition of higher education, including a detailed classification of three main types of indicators: (a) those reflecting the financial status of individual institutions; (b) "general enterprise-wide indicators" specific to the properties and needs of higher education and its constituencies; (c) indicators of external conditions affecting higher education (demographic, economic, and political).

The National Commission made no effort to assess the impact of inflation upon the financial condition of colleges and universities--perhaps partly because of the lack of price indices "specifically tailored" to higher-education expenditures. Fortunately, this omission has been rectified to a considerable degree since its report was published and a major purpose of the present study has been to use recently developed price indices for higher education to determine how inflation has affected the financial condition of different types of institutions.

Another handicap to the National Commission's analysis of "financial distress" was the comparative obsolescence of its statistical data. The latest financial information available came from the "HEGIS" reports of institutions

for 1971-72 to the National Center for Educational Statistics (NCES).[3] Thus there was a two-year lag between that year and the fiscal year in which the Commission's report was published (1973-74).[4] Furthermore, the normal handicaps of this virtually standard data lag, for the analysis of the financial condition of higher education, were greatly magnified in 1973-74 by the extraordinary rates at which wages and prices were increasing.

Hence, as the fiscal year 1973-74 neared its end, it seemed imperative to ACE that a special effort be made not merely to narrow this information gap, but also to gain some insight into how different kinds of institutions had planned to meet the worsening economic conditions that apparently lay ahead in 1974-75. (Under the "normal" HEGIS schedule, no financial analysis of its data for 1974-75 could be expected to appear before 1976-77.) So it was decided to conduct a sample survey in which financial and enrollment data would be requested for three fiscal years: 1972-73, 1973-74, and 1974-75. Official statistics were to be reported when available, viz., actual enrollment data for the first two years and audited financial data for 1972-73. Otherwise, estimates

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[3]"HEGIS" is the acronym for the annual Higher Education General Information Survey conducted by the National Center for Educational Statistics (then an agency in the Office of Education, but now an independent unit within the Education Division of the U.S. Department of Health, Education, and Welfare). The term "Educational" in NCES' name has been changed to "Education."

[4]Despite efforts to accelerate the process, the schedule for HEGIS financial statistics is still frustrating slow. For example, computer tapes for data collected in the late fall of 1974 for the preceding fiscal year (1973-74), were not available almost a year later (October 1975). This means that analyses of these data could hardly be completed and published until well into calendar year 1976--almost two years after the financial events being reported had occurred in the institutions.

were to be made, viz., enrollment estimates for the fall term of 1974-75, and financial estimates for the fiscal years 1973-74 and 1974-75.

Although such estimates have obvious limitations as data for financial analysis, it should be noted that they were to be made at a time (late summer and early fall of 1974) when two sets of firm financial facts were already in hand for the two fiscal years involved: (a) complete income and expenditure records for 1973-74 (although in most cases not yet finally summarized and audited); (b) detailed budgetary allocations for 1974-75. For the latter year, it seemed reasonable to assume that the business officers of the institutions could estimate fairly accurately, in familiar HEGIS categories, what the aggregate revenues and expenditures would be. In any event, such data would at least provide valuable insight into the current financial judgments and planning assumptions that were being made by administrators at a critical period in American higher education. Furthermore, future checks on the validity of these judgments should provide useful methodological guidance to investigators seeking information on the financial condition of colleges and universities in advance of the availability of "official" statistics.

In brief, the general purpose of this study was to analyze the impact of economic pressures during the crucial three-year period, 1972-1975, upon the financial condition of different types of colleges and universities.

II. PROCEDURE

The procedures used will be discussed under the following three headings: (a) the survey questionnaire; (b) the sample of institutions; (c) analytical methods.

The Survey Questionnaire

The survey instrument was designed to collect financial and enrollment data for three fiscal years: 1972-73, 1973-74, and 1974-75. In general, the questionnaire items and instructions were selected from corresponding surveys in the 1973-74 edition of HEGIS -- with appropriate adaptation where estimates instead of actual data were requested (16, 17). In view of the essential identity of the ACE questionnaire with the counterpart sections of published versions of the two HEGIS questionnaires, the detailed instructions for the ACE survey will not be reproduced in this report.

Financial information. The only financial data requested were items selected from the first two sections of the HEGIS financial questionnaire: (a) Part A -- Current Funds Revenues; (b) Part B -- Current Funds Expenditures. A classified list of the items is shown in Table 1 on the following page. A single amount was to be reported for each numbered item in Table 1 and for each of the three fiscal years.

The data requested for 1972-73 were presumably identical with the statistics already reported to NCES if the institution had responded to the HEGIS financial questionnaire during the fall of 1973. It was decided for three reasons to ask institutions for data already submitted by most of them to NCES:

Table 1. A Classification of the Items of Financial Information Requested in the ACE Survey

A. Current Funds Revenues

I. Total Educational and General

1. Student Tuition and Fees

II. Total Student Aid Grants

III. Total Major Service Programs (e.g., community hospitals)

IV. Total Auxiliary Enterprises (e.g., residence halls)

V. Total Current Funds Revenues

B. Current Funds Expenditures

I. Total Educational and General Expenditures

1. Instruction and Departmental Research
2. Organized Activities Related to Educational Departments
3. Sponsored Research
4. Other Separately Budgeted Research
5. Other Sponsored Programs
6. Extension and Public Service
7. Libraries
8. Physical Plant Maintenance and Operation
9. Other Educational and General[a]

II. Total Student Aid Expenditures

III. Total Major Service Programs

IV. Total Auxiliary Enterprises

V. Total Current Funds Expenditures

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[a]The item "Other Educational and General" includes expenditures for the general executive and administrative offices, student services, and other educational and general purposes not reported under the preceding "Educational and General" categories.

(a) to establish continuity with prior HEGIS reporting and thus to provide a frame of reference for the estimates being requested for 1973-74 and 1974-75; (b) to secure data for those institutions in the sample that might not have submitted HEGIS reports for 1972-73; and (c) to avoid the risk that the HEGIS computer tapes for 1972-73 would not become available in time to provide data for the present study.

Enrollment data. Opening fall enrollment figures for three fiscal years were requested as follows: (a) actual enrollments for 1972-73 and 1973-74; estimated enrollments for 1974-75. The instructions asked that only degree-credit enrollment be reported, including resident and extension students (but excluding students taking courses at home by mail, radio, or television). Five enrollment categories were included in the questionnaire:

A. Undergraduates

B. Unclassified Students

C. First-Professional Students (those enrolled in a professional program requiring at least two years of academic work for entrance and six years for a degree)

D. Graduate Students (those holding the bachelor's or first professional degree, or the equivalent, who were taking work at the graduate level)

E. Grand Total

For each of these categories, and for each year, three total-enrollment figures were requested: (a) full-time headcount; (b) part-time headcount; (c) the full-time-equivalent (FTE) value for the part-time headcount. In view of evident inaccuracies in the FTE data from certain institutions, none of the reported figures was used in the analysis; instead, FTE equivalents were cal-

culated for the part-time figures of all institutions -- by the formula used by NCES, viz., the part-time headcount divided by three.

The Sample of Institutions

Original sample. In order to expedite the survey, it was decided to use the sample of 646 institutions then participating in ACE's Higher Education Panel (HEP). This group had been chosen to be approximately representative of the entire population of institutions of higher education--in terms of stratification primarily by type of control (private, public) and by the classification established by NCES for its HEGIS reports (universities, other four-year institutions, two-year institutions). Selectivity in admission standards was a supplemental stratification category, and certain special types of institutions were included (12).

Questionnaires were mailed to presidents of these institutions in late July 1974, under a covering letter from President Roger W. Heyns of the American Council on Education. A total of 506 responses was received (78 per cent of the sample) including 78 whose data were unusable and 35 received after the cut-off date (November 1). This left a total of 393 completed questionnaires (61 per cent) that seemed suitable for analysis.

Classification of the institutions by the system developed by the Carnegie Commission on Higher Education. The modified NCES classification of institutions reflected in the HEP sample was not satisfactory for the analytical purposes of this study, partly because the categories "universities" and "other four-year institutions" each included highly heterogeneous kinds of institutions in terms of programs, resources, and other characteristics. So the classification

system developed by the Carnegie Commission on Higher Education was adopted as the primary framework for the analysis of the survey data (6). This change meant, however, that the design underlying the structure of the HEP sample was not applicable for testing the representativeness of the reclassified institutions. So, although it was not one of the purposes of this study to estimate population values from sample statistics, it seemed desirable to make somewhat detailed population-sample comparisons for the individual categories of the Carnegie Commission classification.

The degree of correspondence between ACE category samples and corresponding national totals was tested in terms of three variables: (a) number of institutions; (b) FTE enrollment; (c) median expenditure per student for "educational-and-general" purposes.

Comparison of ACE sample with national population of institutions in terms of number of institutions, by Carnegie Commission categories. When the sample of 393 institutions returning usable records was classified by Carnegie Commission categories (see Appendix TABLE A-1[5]), a further reduction in number to 370 was made. The reasons were two-fold: (a) the very small number of public "Liberal Arts Colleges I and II" in the national population (only 28); (b) the heterogeneous nature of the category "Specialized Institutions" (a miscellany of theological, technical, art, medical and other kinds of specialized schools), as well as the small numbers in the ACE sample.

The distributions of the reduced sample of 370 institutions by Carnegie Commission category and by type of control are presented in Table 2 on the following page. The first two columns show the numbers of private and public institutions, respectively, while

[5] Two sets of tables are included in the report: (a) tables incorporated into the text, which are designated "Table 1," "Table 2," etc.; (b) supplementary tables in the Appendix, which are designated "TABLE A-1," "TABLE A-2," etc.

Table 2. Number of Institutions in the ACE Survey by Carnegie Commission Categories and as Percentages of National Category Totals--Fall Term 1972

Type of Institution	Number in ACE Survey		Percentage of Category Total[a]	
	Private (1)	Public (2)	Private (3)	Public (4)
Research Univ. I	12	21	54.5%	70.0%
Research Univ. II	11	16	84.6	59.3
Doctoral Univ. I	13	23	68.4	67.6
Doctoral Univ. II	7	12	63.6	70.6
Compr. U. & C. I[b]	21	32	21.4	14.4
Compr. U. & C. II	14	8	29.8	9.4
Liberal Arts C. I	57	NA	39.6	NA
Liberal Arts C. II	78	NA	14.3	NA
Two-Year Colleges	13	32	5.1	4.0
Total	226	144	19.5%	11.5%

[a]The percentages of category totals are based on the 1970 USOE figures used in A Classification of Institutions of Higher Education (Carnegie Commission on Higher Education). For example, the 12 private Research Universities I in the sample constituted 54.5 per cent of the national total of 21 in that category.

[b]The abbreviation "Compr. U. & C." is used for "Comprehensive Universities and Colleges."

columns (3) and (4) show corresponding percentages of the national category totals. For example, there are 12 private "Research Universities I" in the sample, which is 54.5 per cent of the national total of 21 in that category.

It is obvious from the percentages in Table 2 that all four categories of universities are heavily overrepresented in the ACE sample (the proportions ranging from 54.5% to 84.6% of the national totals). Most heavily underrepresented are the two-year colleges (5.1% and 4.0%, respectively, of the private and public national totals). Unsatisfactorily low also are the public "Comprehensive Universities and Colleges I and II" (14.4% and 9.4%, respectively).

Comparisons of ACE sample with national population of institutions in terms of FTE enrollment, by Carnegie Commission categories. The representativeness of the institutional sample seems generally better when measured by FTE enrollment than when measured in terms of number of institutions. The enrollment comparisons are shown in Table 3 on the following page and in Appendix TABLE A-2. (The latter includes the detailed enrollment distributions for both the population and the sample of institutions--from which the figures in Table 3 were derived.)

The sample institutions had 36 per cent of the private and 30.6 per cent of the public fall-term enrollment in 1972-73--for the Carnegie Commission categories listed in Table 3--in contrast to corresponding percentages of 19.5 and 11.5 shown in Table 2 for the total numbers of institutions.

As an expected corollary to these general differences, the detailed "percentages-of-category-totals" for enrollment shown in Table 3 are generally higher for both public and private institutions than the corresponding values in Table 2 for number of institutions.

Comparison of ACE sample with national population of institutions in terms of "Education-and-General" (E&G) expenditure per FTE student. Since the main focus of this study is upon the financial condition of institutions, it seemed desirable to check on the representativeness of the ACE sample in terms of an important financial variable. So the average E&G expenditure per FTE student, by Carnegie Commission categories, was selected for this purpose. The results are

Table 3. Full-Time-Equivalent (FTE) Enrollment of Institutions in ACE Survey, by Carnegie Commission Categories and as Percentages of National Category Totals--Fall Term 1972

Type of Institution	FTE Enrollment (Thousands)		Percentage of Category Total[a]	
	Private (1)	Public (2)	Private (3)	Public (4)
Research Univ. I	96.3	532.2	46.8%	70.8%
Research Univ. II	79.4	255.2	86.5	57.4
Doctoral Univ. I	95.8	251.1	56.0	67.9
Doctoral Univ. II	36.3	165.8	71.6	74.3
Compr. U. & C. I	91.8	243.7	27.4	17.2
Compr. U. & C. II	25.2	28.7	31.2	10.5
Liberal Arts C. I	75.2	NA	42.1	NA
Liberal Arts C. II	82.1	NA	19.9	NA
Two-Year Colleges	7.8	91.0	7.0	5.2
Total	589.9	1567.7	36.0%	30.6%

[a]The percentages of category totals are based on the 1970 USOE figures used in A Classification of Institutions of Higher Education (Carnegie Commission on Higher Education). For example, 96.3 thousand FTE students in private Research Universities I in the sample constituted 46.8 per cent of the national total of 205.8 thousand in that category.

shown in TABLE A-3 in the Appendix. The following figures from that table for Research Universities I will illustrate the kind of comparison made (in terms of average dollars per FTE student for E&G expenditures in 1972-73):

Research Univ. I	HEGIS Total	ACE Sample	Sample % of Total
Private	$10,384	$10,741	103.4%
Public	4,942	4,877	98.7%

In general, the figures in TABLE A-3 show reasonably close correspondence between the national (HEGIS) and the sample averages, with one major exception. This occurs for private Doctoral Universities I, where the median E&G expenditure for the ACE sample is 27.4 per cent higher than the national HEGIS figure ($4,240 vs $3,328 per FTE student). All other discrepancies are less than 10 per cent in magnitude except in the case of public Comprehensive Universities and Colleges II, where the sample median is 10.8 per cent higher than the HEGIS value ($2,321 vs $2,094).

Analytical Framework

The general framework for the analyses to be presented in the following sections is defined by the following properties: (a) type of institution, in terms of the classification developed by the Carnegie Commission on Higher Education; (b) type of control (private, public); (c) fiscal year (1972-73, 1973-74, 1974-75).

Primary emphasis has been placed upon the comparative analysis of changes in the financial status of different types of institutions over the three-year period, as measured in terms of selected variables and indices. No effort has been made to identify individual institutions or "clusters" of institutions in terms of criteria of "financial distress," although this highly important problem obviously deserves investigation. But it was not feasible to undertake

such a task in the present study, partly because the breakdown of the total ACE sample by Carnegie Commission classification and by type of control yielded sub-groups too small for that kind of analysis. Even if contiguous pairs of the first eight Carnegie Commission categories had been combined, it is doubtful that the numbers of institutions per group would have been sufficient to permit significant "cluster analysis" within most of the composite groups. Data from the entire population of colleges and universities would be desirable in order to provide sufficient homogeneity and size of sub-groups to justify the use of this kind of method.

In any event, the focus in this study is on the impacts of changing economic and other conditions over a critical three-year period upon types of institutions that might be expected to show differential responses to such changes. The results will be presented in the following five major sections: (a) enrollment trends; (b) trends in operating revenues; (c) deficits in operating revenues; (d) the effects of inflation; (e) the distribution of expenditures by function.

III. ENROLLMENT TRENDS

Changes in enrollment patterns were among the six types of statistical evidence considered by the National Commission on the Financing of Postsecondary Education in its 1973 study. A slowing growth of enrollment over the three-year period from 1969-70 through 1971-72 was reported--more pronounced in private than in public institutions. And comparisons of percentage changes were made, for 1971-72 only, among nine Carnegie Commission types of institutions (private and public). The latter analysis did not show consistent trends either for private-public comparisons or for comparisons among Carnegie Commission categories. Four types of institutions showed enrollment declines for 1971-72, for both the private and public sectors; but the reported decreases were so high for Research Universities I (-8.8% for private and -16.6% for public institutions) as to raise a serious question about the accuracy or representativeness of the data.

The present study has extended the analysis of enrollment trends to the period 1972-1975. Two methods of measuring changes by Carnegie Commission categories were used: (a) year-to-year percentage changes; (b) percentages of institutions showing declines in enrollment.

Percentage Changes in Enrollment

Percentage change per institution in opening fall enrollment. The percentage change in total FTE enrollment was computed for each institution for 1973-74 (over 1972-73) and for 1974-75 (expected increase over 1973-74). Medians

of the percentage-change values for individual institutions were then computed for each Carnegie-Commission type (public and private). The results are shown in Table 4 below.

Table 4. Median of Percentage Changes per Institution in FTE Enrollment from 1972-73 to 1974-75, by Carnegie Commission Categories

Type of Institution	Private Institutions		Public Institutions	
	FY 1973 to 1974 (1)	FY 1974 to 1975 (2)	FY 1973 to 1974 (3)	FY 1974 to 1975 (4)
Research Univ. I	0.6%	1.0%	1.9%	0.5%
Research Univ. II	1.2	2.1	1.8	1.2
Doctoral Univ. I	0.7	1.5	1.5	1.6
Doctoral Univ. II	-1.7	2.2	0.4	0.6
Compr. U. & C. I	0.2	-0.5	0.6	0.8
Compr. U. & C. II	0.2	-0.4	-2.6	1.0
Liberal Arts C. I	1.2	0.1	NA	NA
Liberal Arts C. II	-2.2	1.2	NA	NA
Two-Year Colleges	-3.8	1.5	5.4	5.0

In general, the median magnitude of the year-to-year changes is small for all types of institutions, except public two-year colleges. The latter show annual enrollment increases of about five per cent for 1973-74 and 1974-75. Among other year-to-year changes are five enrollment decreases in a total of 18 comparisons for groups of private institutions, but only one decrease in 14 possibilities for public institutions.

Percentage changes in total FTE enrollments by Carnegie Commission categories. The results by a different method of calculating percentage changes in enrollment are shown in TABLE A-4 in the Appendix. The total enrollment by type of institution is found and the percentage change in the total from year to year is calculated. Obviously, percentages derived by this method are influenced directly by the size of each institution's enrollment, and this unequal weighting probably makes this measure an inferior index of enrollment change for a Carnegie Commission category than the median of percentage changes per institution (shown in Table 4).

Actually, corresponding values in the two sets of percentage changes are highly correlated for 1973-74: (a) for private institutions, the coefficient of correlation between the rank order of the percentage changes in Table 4 and the corresponding values in TABLE A-4 is .94; for public institutions, the corresponding coefficient is .89. But for 1974-75, the coefficients are .43 and .36, for private and public institutions, respectively.

Institutions Showing Enrollment Declines

Another approach to the analysis of enrollment trends is shown in Table 5 on the following page, which presents percentages of institutions reporting enrollment declines from one fiscal year to the next (and over the two-year period). These figures show generally that the most serious enrollment problems lay with Comprehensive Universities and Colleges (I and II), private and public, and with private Liberal Arts Colleges II--findings that are consistent with the data in Table 4 based on the average of the percentage increases per institution.

Table 5. Percentage of Institutions Reporting Declines in FTE Enrollment from 1972-73 to 1974-75, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	FY 1973 to 1974 (1)	FY 1974 to 1975 (2)	FY 1973 to 1975 (3)	FY 1973 to 1974 (4)	FY 1974 to 1975 (5)	FY 1973 to 1975 (6)
Research Univ. I	41.7	16.6	33.3	28.6	23.8	28.6
Research Univ. II	45.5	27.3	36.4	18.8	31.2	19.8
Doctoral Univ. I	30.8	23.1	23.1	47.8	20.4	34.8
Doctoral Univ. II	56.1	28.6	43.9	50.0	41.7	50.0
Compr. U. & C. I	47.6	57.1	57.1	53.1	40.6	50.0
Compr. U. & C. II	50.0	50.0	64.3	50.0	37.5	50.0
Liberal Arts C. I	38.6	47.4	36.8	NA	NA	NA
Liberal Arts C. II	64.1	39.7	65.4	NA	NA	NA
Two-Year Colleges	53.8	38.5	38.5	28.1	15.6	25.0

Summary on Enrollment Trends

Perhaps the most general statement that may be made about the findings on enrollment changes is that overall they present a picture of relative stabilization, which was to be expected from other reports on enrollment trends.

The variations in trends among Carnegie Commission categories of institutions--whether within or between the private and public groups--are generally rather small. But the declines noted for the three private categories may nevertheless indicate serious impacts on revenues--especially for individual institutions within these groups whose declines in enrollment fall below the relatively small negative median values.

IV. TRENDS IN OPERATING REVENUES

The income data collected in the ACE survey consisted of only six items for each of three fiscal years (1972-73, 1973-74, 1974-75). As already noted in Table 1, four of these items were the major components of Current Funds Revenues: Educational and General, Student Aid, Major Service Programs, and Auxiliary Enterprises. The other items of revenue data collected in the survey were Tuition and Fees (an element of Educational and General) and total Current Funds Revenues.

It would have been useful to have information on changes in other components of educational-and-general revenues than tuition and fees (e.g., those from federal, state, and private sources). But it did not seem feasible to impose such an additional reporting burden on the institutions, especially when so much of the questionnaire called for estimates rather than available data.

The general purpose of the study of revenue trends was to determine whether significant changes occurred among them over the three-year period and whether the pattern of changes differed for different types of institutions.

Units and Indices

A financial "common denominator." Since institutions vary widely in the absolute magnitudes of their revenues and expenditures--depending on size, types of programs, and other conditions--some approximation to a comparable financial unit is needed for analytical purposes. The unit adopted for this study is the average dollar amount per full-time-equivalent (FTE) student. Although the use of this unit by no means assures strict inter-institutional comparability of financial data, it tends to "control" variations in revenue related primarily to enrollment changes.

The median as a preferred average. Even though the grouping of institutions by Carnegie Commission categories achieved a considerable degree of homogeneity in terms of program characteristics

and revenue per FTE student, substantial variation remained among the financial "measures" within most of the groups. Furthermore, the small size of several of the category samples, and the non-normality of the distributions, made it desirable to use the median rather than the mean as a group average.

Year-to-year percentage change as a trend index. The percentage increase or decrease in revenue from year to year has been a common type of index used in earlier analyses of financial trends, and it is the principal indicator used in the present analysis.

Changing ratios among revenue components. In addition to comparisons of separate series of percentage changes in revenue components, changing ratios among members of a pair of variables is also used as a form of trend analysis. An example in the present study is the ratio between Tuition-and-Fee and Educational-and-General revenues, which can indicate differences between types of institutions in degree of dependence upon tuition and fees for operating purposes.

Educational-and-General (E&G) Revenues

A summary of total E&G revenues per FTE student is shown in Table 6 on the following page, by type of institution (Carnegie Commission categories), mode of governance (private, public), and fiscal year. Before discussing these data, it should be emphasized that direct comparisons of the variations in income level--either by class of institution or type of control--cannot meaningfully be made without additional information regarding differences in programs, enrollment "mix," quality, and other institutional characteristics. In a later section of the report, differences among these groups in the distribution of expenditures by types of functions will be considered; and such data will throw some light on factors that produce variations like those shown in Table 6. Whatever the explanation of the wide range of average revenue per student, institutions within each of the Carnegie Commission categories may find these figures useful as rough benchmarks against which to compare their own data. Too little information of this type is available by category of

Table 6. Trends in Median Educational-and-General Revenues per FTE Student, by Carnegie Commission Categories--Current Dollars

Type of Institution and Variable	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I						
Amount/FTE Student	$11,169	$11,799	$12,688	$4,986	$5,238	$5,689
Percentage Change		5.64%	7.54%		5.05%	8.61%
Research Univ. II						
Amount/FTE Student	5,907	6,338	6,165	3,574	4,108	4,220
Percentage Change		7.30%	-2.73%		14.94%	2.73%
Doctoral Univ. I						
Amount/FTE Student	4,586	4,748	4,912	3,104	3,467	3,433
Percentage Change		3.53%	3.45%		11.70%	-0.99%
Doctoral Univ. II						
Amount/FTE Student	2,657	3,133	3,493	2,230	2,370	2,462
Percentage Change		17.92%	11.49%		6.28%	3.88%
Compr. U. & C. I						
Amount/FTE Student	2,426	2,494	2,561	2,182	2,345	2,411
Percentage Change		2.80%	2.69%		7.47%	2.81%
Compr. U. & C. II						
Amount/FTE Student	2,329	2,575	2,680	2,167	2,437	2,432
Percentage Change		10.56%	4.08%		12.46%	-0.21%
Liberal Arts C. I						
Amount/FTE Student	3,285	3,634	3,724	NA	NA	NA
Percentage Change		10.62%	2.48%			
Liberal Arts C. II						
Amount/FTE Student	2,502	2,684	2,837	NA	NA	NA
Percentage Change		7.27%	5.70%			
Two-Year Colleges						
Amount/FTE Student	1,935	2,065	2,175	1,561	1,750	1,915
Percentage Change		6.72%	5.33%		12.11%	9.43%
Median % Change[a]		7.27%	4.08%		11.70%	2.81%

[a]Each of these values is the median of the percentages above it in the column.

institutions; and comparative figures for the last three years of financial crisis may be especially valuable.

The focus in the present study, however, is upon variation in income trends for different types of institutions.

Percentage changes in median E&G revenue per student. The overall direction and amount of change in institutional income is indicated by the year-to-year percentage changes in median educational-and-general revenues per FTE student shown in Table 6. For private Research Universities I, for example, the median income per FTE student in 1973-74 ($11,799) was 5.64 per cent higher than in 1972-73 ($11,169). Except for Research Universities I (private and public), all other types of institutions estimated lower percentage increases for 1974-75 than for 1973-74. Three classes of institutions--one private and two public--projected lower median revenue per FTE student for 1974-75 than for 1973-74.

An alternative method of computing percentage changes in E&G revenues per student. As was done in the case of enrollment changes earlier, average changes in income per student have been computed by taking the median of year-to-year percentage changes for individual institutions. The results are shown in Table 7 on the following page.

Comparison of the percentages in Table 7 with corresponding values in Table 6 shows considerable divergence between the two sets of values, but neither appears to run consistently higher or lower than the other. Correlation coefficients have been computed between the rank orders of the percentage changes for corresponding columns of Tables 6 and 7--to provide rough measures of agreement between the indices of revenue change derived by the two methods. In general, the correlations between the two types of percentages are higher for the private than for the public institutions. For example, the correlation between the percentage changes from FY 1973 to FY 1974 for private institutions was .61 between the percentages in column 2 of Table 6 and the corresponding values in column 1 of Table 7. For the public institutions, the parallel correlation coefficient was only .11 (i.e., that between the percentages in column 5 of Table 6 and those in column 3 of Table 7). For the changes from FY 1974 to FY 1975, the correlations between the two types of percentages were .48 for private and .28 for public institutions.

The percentage index shown in Table 7 (median of institutional percentage changes) is perhaps preferable to that in Table 6 (percentage change in medians). The former gives equal weight to the change indices of each institution in the distribution from which

Table 7. Median Percentage Changes in Educational-and-General (E&G) Revenues per FTE Student, by Carnegie Commission Categories

Type of Institution	Private Institutions		Public Institutions	
	FY 1973 to 1974 (1)	FY 1974 to 1975 (2)	FY 1973 to 1974 (3)	FY 1974 to 1975 (4)
Research Univ. I	3.0%	6.0%	5.8%	5.6%
Research Univ. II	2.5	0.5	7.0	5.3
Doctoral Univ. I	4.9	3.5	9.2	7.5
Doctoral Univ. II	11.5	5.5	9.0	5.0
Compr. U. & C. I	4.3	4.5	8.5	8.0
Compr. U. & C. II	12.3	6.5	12.0	5.0
Liberal Arts C. I	5.9	4.3	NA	NA
Liberal Arts C. II	7.6	4.5	NA	NA
Two-Year Colleges	11.5	0.5	4.7	3.3
All Institutions	6.4	4.4	8.2	5.8

the median value is computed. Furthermore, the separate distributions of percentage changes for all types of private (or public) institutions may all be combined into a composite distribution for each fiscal year. Calculations of the median values for such composite distributions yielded the average percentages for "All Institutions" shown in the last line of Table 7. The data indicate that the overall percentage increase in E&G revenue per student for private institutions was substantially lower than that for public institutions: (a) for 1973-74, 6.4% for private and 8.2% for public schools; (b) for 1974-75, 4.4% for private and 5.8% for public schools. (The National Commission on the Financing of Postsecondary Education reached the opposite conclusion from its comparisons covering the two fiscal years 1970-71 and 1971-72, 18, p. 199.)

Tuition-and-Fee (T&F) Revenues

Among the findings of the National Commission on the Financing of Postsecondary Education were these: (a) that for 1970-71 and 1971-72, percentage increases in tuition-and-fee income were generally higher than those for

E&G income, both for private and public institutions; (b) that tuition-and-fee percentage changes for these two years generally were higher for public than for private institutions (18, p. 421). The ACE revenue data were analyzed to determine whether such relationships could be confirmed and to check on variations in the relationships between these two revenue components for different types of institutions.

Trends in median T&F revenues by Carnegie Commission categories of institutions. Trends in median T&F revenues per FTE student are shown in Table 8 on the following page by Carnegie Commission categories of institutions and for the three fiscal years. As in Table 6 for E&G revenue, the percentage change in median values is shown for each type of institution (private and public). Contrary to the National Commission's finding cited above, the percentage increases for private institutions run generally higher than those for public institutions; but there are a few rather striking exceptions. For example, in the case of Comprehensive Universities and Colleges II, the median increase in T&F revenue is 15.3% for public institutions for 1974-75 but only 1.1% for corresponding private schools.

The median values in the last line of Table 8, however, show overall T&F percentage increases of 6.6% for private institutions for 1973-74 and 5.8% for 1974-75, whereas the corresponding figures for public institutions are 0.0% and 2.8%.

Such comparisons of T&F revenues for public and private institutions may be misleading since public institutions generally have two scales of tuition charges (one for resident and one for non-resident students) whereas private institutions have uniform rates for all students in a given program. A changing "mix" of resident and non-resident students could cause erratic fluctuations in T&F revenues for public institutions which might have little relation to rate changes. Hence, the percentage decreases in median revenue per student shown in Table 8 for several categories of public institutions almost certainly don't mean that their T&F rates have been lowered. The more likely explanation is that these institutions enrolled higher proportions of resident students, which could produce declines in revenue per student because of the lower resident rates.

In the case of public two-year colleges, the decreases in T&F revenues might have reflected increasing part-time enrollment plus changes in curricular "mix" involving lower T&F rates.

Table 8. Trends in Median Tuition-and-Fee Revenues per FTE Student, by Carnegie Commission Categories--Current Dollars

Type of Institution and Variable	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I						
Amount/FTE Student	$2,604	$2,846	$2,978	$696	$700	$746
Percentage Change		9.3%	4.7%		0.6%	6.6%
Research Univ. II						
Amount/FTE Student	2,541	2,577	2,830	616	667	686
Percentage Change		1.4%	9.8%		8.3%	2.8%
Doctoral Univ. I						
Amount/FTE Student	2,431	2,573	2,721	682	671	720
Percentage Change		5.8%	5.8%		-1.6%	7.3%
Doctoral Univ. II						
Amount/FTE Student	1,707	1,864	2,164	608	608	606
Percentage Change		9.2%	16.1%		0.0%	-0.3%
Compr. U. & C. I						
Amount/FTE Student	1,958	2,060	2,154	495	486	497
Percentage Change		5.2%	4.6%		-1.8%	2.3%
Compr. U. & C. II						
Amount/FTE Student	1,787	1,933	1,955	521	561	647
Percentage Change		8.2%	1.1%		7.7%	15.3%
Liberal Arts C. I						
Amount/FTE Student	2,360	2,515	2,597	NA	NA	NA
Percentage Change		6.6%	3.3%			
Liberal Arts C. II						
Amount/FTE Student	1,677	1,823	1,938	NA	NA	NA
Percentage Change		8.7%	6.3%			
Two-Year Colleges						
Amount/FTE Student	1,208	1,288	1,476	311	304	281
Percentage Change		6.6%	14.6%		-2.2%	-7.6%
Median % Change[a]		6.6%	5.8%		0.0%	2.8%

[a]Each of these values is the median of the percentages above it in the column.

Median of percentage changes in T&F revenues. The median of the percentage changes by individual institutions in T&F revenues is given in Table 9, which is shown below, for different types of institutions. Comparisons of the trends for private and public institutions show results generally similar to those in Table 8: private institutions reported higher increases in T&F revenues per student than public institutions.

In terms of medians for all institutions combined, by type of control, the private increases shown in Table 9 are 6.0% and 5.5% while the public increases are 1.9% and 2.1%, for 1973-74 and 1974-75, respectively.

There appear to be no marked and consistent differences among the private Carnegie Commission groups in T&F revenue changes. In this connection, it might be of some methodological interest to note that the correlation between the rank orders of the percentage changes for different types of institutions in Tables 8 and 9 (private institutions) was rather high for the 1973-74, the coefficient being .70. But the parallel correlation for 1974-75 percentage changes was only .13. So the two methods of computing percentage change in revenue per student do not necessarily yield consistent results.

Table 9. Median Percentage Changes in Tuition-and-Fee (T&F) Revenues per FTE Student, by Carnegie Commission Categories

Type of Institution	Private Institutions		Public Institutions	
	FY 1973 to 1974 (1)	FY 1974 to 1975 (2)	FY 1973 to 1974 (3)	FY 1974 to 1975 (4)
Research Univ. I	7.5%	6.8%	0.4%	2.8%
Research Univ. II	3.5	5.3	4.5	3.0
Doctoral Univ. I	5.8	5.5	1.5	2.2
Doctoral Univ. II	8.5	7.5	0.5	1.0
Compr. U. & C. I	2.8	3.8	4.0	2.8
Compr. U. & C. II	7.5	5.0	6.0	6.0
Liberal Arts C. I	5.5	6.3	NA	NA
Liberal Arts C. II	6.5	5.1	NA	NA
Two-Year Colleges	8.8	3.8	0.5	1.2
All Institutions	6.0	5.5	1.9	2.1

Among the public institutions, the principal deviation from the generally very low T&F increases occurred for Comprehensive Universities & Colleges II, which reported increases of 6.0% for both 1973-74 and 1974-75. Coefficients of correlation were also computed for these institutions between the rank orders of the percentage changes in revenue per FTE student, by Carnegie Commission Categories. The correlation between the 1973-74 percentages in Tables 8 and 9 was .46 for public institutions; for 1974-75, the coefficient was .68.

Comparison of Changes in T&F Revenues with Changes in E&G Revenues

One purpose of the study was to check on the hypothesis that the financial pressures of the past two years had forced institutions--especially private colleges and universities--to rely increasingly upon tuition and fees for educational-and-general revenues. Further, it has been held that such pressures have been relatively stronger for the financially weaker institutions. Several types of analysis have been made to check on these assumptions and other aspects of the relationships between these two revenue variables.

Comparisons of percentage changes in T&F and E&G revenues. It will be recalled that two methods of measuring trends in these revenue components were used in the preceding pages: (a) year-to-year percentage change in median income per FTE student, by Carnegie-Commission categories of institutions; (b) median of individual percentage changes in revenue per FTE student for institutions within each such group. Comparisons of T&F with E&G revenue changes by the first of these methods involve the use of data from Table 6 and Table 8. The following rows of figures come from the bottom lines of these respective tables (rounded) and are overall averages (medians) of the two sets of percentage changes.

Type of Revenue	Private Institutions		Public Institutions	
	1973-74	1974-75	1973-74	1974-75
Educ. & General	7.3%	4.1%	11.7%	2.8%
Tuition & Fees	6.6%	5.8%	0.0%	2.8%

There is certainly little support in these figures for the view that T&F revenues for private institutions were increasing at a more rapid rate than E&G revenues. The reverse was true for 1973-74, when T&F revenues per student increased 6.6% while the E&G figure was 7.3%. Although the projected increases for 1974-75 show a higher percentage for T&F, the difference isn't marked (5.8% vs 4.1%). If the E&G percentages for the two years are combined, and compared with a similar combination of T&F percentages, the latter total is slightly higher for the private institutions; but the difference is negligible.

Over the two-year period, the public institutions had substantially higher rates of increase in E&G than in T&F revenues per FTE student, although for 1974-75 both had identical percentage increases (2.8%).

Similar results were found by the alternative, and preferred, method of computing percentage changes in revenues per FTE student, viz., calculating the median of the percentage changes for individual institutions. The following are the overall medians from Table 7 (E&G) and Table 9 (T&F), for all types of institutions combined, by type of control:

Type of Revenue	Private Institutions		Public Institutions	
	1973-74	1974-75	1973-74	1974-75
Educ. & General	6.4%	4.4%	8.2%	5.8%
Tuition & Fees	6.0%	5.5%	1.9%	2.1%

The patterns of relationships among these revenue-change indices for private institutions are essentially similar to those found by the first method (see bottom of p. 27). In the case of the public institutions, the increases in E&G revenues are substantially higher than those for T&F revenues in both years by the second method.

Trends in ratios between T&F and E&G revenues per FTE student. It has been argued that institutions highly dependent upon T&F revenue would be more vulnerable to financial pressures than those with more diversified sources of income. Presumably, such institutions would be forced to increase tuition rates disproportionately in order to meet rising costs, but in doing so would risk a reduction in enrollment and T&F revenue. The ratio between T&F revenue and E&G revenue per FTE student would seem to provide a suitable index of differences among institutions in vulnerability to such financial pressures. Such ratios or percentages have been computed for the different types of institutions in the Carnegie Commission classification and are shown in Table 10 on the following page.

Table 10. Median Tuition-and-Fee Revenues as Percentages of Educational-and-General Revenues per FTE Student, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	23.3%	24.1%	23.5%	14.0%	13.4%	13.1%
Research Univ. II	43.0	40.7	45.9	17.2	16.2	16.3
Doctoral Univ. I	53.0	54.2	55.4	22.0	19.4	21.0
Doctoral Univ. II	64.2	59.6	62.0	27.3	25.7	24.6
Compr. U. & C. I	80.7	82.6	84.1	22.7	20.7	20.6
Compr. U. & C. II	76.7	75.1	72.9	24.0	23.0	26.6
Liberal Arts C. I	71.8	69.2	69.7	NA	NA	NA
Liberal Arts C. II	67.0	67.9	68.3	NA	NA	NA
Two-Year Colleges	62.4	62.4	67.9	19.9	17.4	14.7

A corollary to this "vulnerability" hypothesis might be the expectation that the private institutions with relatively high T&F/E&G ratios would show a progressive increase in them during the past three years. But the results shown in Table 10 do not consistently confirm this expectation. There are substantial differences among types of institutions in the percentage of E&G revenue derived from tuition and fees. But the patterns of change in T&F/E&G ratio over time show no consistent relationship to the relative magnitude of this percentage for different types of institutions.

In general, six of the nine groups of private institutions have higher T&F/E&G ratios for 1974-75 than for 1972-73, but the differences in most cases are relatively small.

For the public institutions, the T&F/E&G ratios in Table 10 show no evidence of disproportionate increases in tuition and fees as a means to providing additional E&G revenues. In fact, for six of the seven public groups, the T&F/E&G ratio was lower for 1974-75 than for 1972-73.

Trends in Other Revenue Components

In addition to E&G and T&F revenues, aggregate data were collected on revenues for Student Aid, Major Service Programs, Auxiliary Enterprises, and total Current-Funds Revenues. Results for only three of these categories will be presented--omitting Major Service Programs since no income in this category was reported by institutions in several of the Carnegie Commission groups.

Detailed trend data for these three revenue variables are presented in Appendix TABLES A-5 (Student Aid), A-6 (Auxiliary Enterprises), and A-7 (Total Current-Funds Revenues). For each type of revenue, the format is the same as that used in text Tables 6 and 8: the median amount of revenue per FTE student is presented for each of three fiscal years, by type of institution; then the percentage change in medians is shown for 1973-74 (from 1972-73) and for 1974-75 (from 1973-74).

The following is a summary of the percentage changes for all types of institutions combined, by type of control, for all three of these revenue variables (the respective bottom lines in TABLES A-5, A-6, and A-7):

Type of Revenue	Private Institutions		Public Institutions	
	1973-74	1974-75	1973-74	1974-75
Student Aid	9.2%	-5.7%	-5.1%	3.0%
Auxiliary Enter.	5.2%	6.0%	4.2%	2.4%
All Current Rev.	8.1%	2.5%	6.3%	5.7%

Like similar trend indices for E&G and T&F revenues, there are wide variations among the Carnegie Commission groups about these overall average values. For example, three of the nine groups of private institutions reported higher

percentage increases in student aid for 1974-75 than for 1973-74, although the median for all nine shows a decline of -5.7 per cent. Regarding the student-aid figures for public institutions, practices among states in providing aid to students vary widely, and state appropriations for this purpose often will not be reflected in the student-aid-revenue accounts of public colleges and universities. So the figures for public institutions in TABLE A-5 will probably not be comparable to those for private institutions as indicators of student-support trends.

The data for auxiliary enterprises are also difficult to interpret, partly because of the unaccountable variability among the percentage-change values for similar groups of institutions and partly because the nature of "auxiliary-enterprises" revenue differs widely among institutions (residential vs commuter campuses being an obvious example). In any event, the average percentage changes for auxiliary enterprises tabulated above show a stable, moderate rate of revenue increase for private institutions (5.2% and 6% for the two years), and somewhat lower rates for public institutions (4.2% and 2.4%).

Regarding Current Funds Revenues (CFR), this category includes all of the preceding revenue components (with E&G revenues comprising the greater part of it--usually some 70 per cent or more). The ratios of E&G to CFR medians, by types of institutions, can be computed from the values given in Table 6 for E&G and in TABLE A-7 for CFR. The summary percentages in TABLE A-7 indicate lower rates of increase for CFR in 1974-75 than in 1973-74, with a sharper decline for private institutions (from 8.1% to 2.5%) than for public institutions (6.3% to 5.7%).

V. DEFICITS IN OPERATING REVENUES

The National Commission on the Financing of Postsecondary Education identified two types of deficits in its search for indicators of "financial distress" among colleges and universities: (a) deficit defined as "an excess of reported general-fund expenditures compared with general-fund income"; (b) "student aid deficit," by which is meant an excess of expenditures for student aid over income restricted for student-aid purposes. Both types of deficits are considered in this report.

Deficits in Current-Funds Revenues

The relationship between current-funds revenues and current-funds expenditures has been used as the basis for determining operating deficits, rather than the corresponding relationship for educational-and-general funds which was used by the National Commission on the Financing of Postsecondary Education. The principal reason for this choice was the fact that institutions vary in the extent to which "interactions" between the various funds are allowed to occur, as well as in the conventions used in deciding and reporting how total current income is allocated among certain funds. Unrestricted income may, for example, be allocated by a governing board to "auxiliary enterprises" or to "student aid" rather than for "educational-and-general" purposes. Hence, it seems likely that the evaluation of an institution's operating resources in terms of E&G funds only would not yield as adequate an account of its general financial condition as that based on total Current Funds Revenues.[6]

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[6]Bowen has made a related point in criticizing Halstead's higher-education price index (HEPI) for the omission of auxiliary enterprises from the expenditure base for the HEPI (3, pp. 2-3). (The HEPI is discussed in a later section on inflation.)

Two methods have been used in studying variations among the different types of institutions, public and private, in frequency and magnitude of current-funds deficits: (a) the first involves calculating the differences between median revenues and median expenditures per FTE student for each group of institutions (private and public); (b) the second method shows the number and percentage of institutions within each Carnegie Commission category reporting deficits and the median amounts of the respective deficits.

Balance of current-funds revenues and expenditures, by Carnegie Commission categories and type of control. The detailed revenue-expenditure data (medians per FTE student) for all types of institutions are shown in Appendix TABLE A-8. The differences between the revenue and expenditure averages, by type of institution, are summarized in Table 11 on the following page.

One purpose of this kind of overall comparison was to determine whether group deficits tended to increase over the three-year period under study. The data in Table 11 do show such an increase among the nine Carnegie Commission groups of private institutions: one group deficit in 1972-73; three estimated for 1973-74; four expected for 1974-75. Except for Comprehensive Universities and Colleges I ($121 for 1974-75) and Two-Year Colleges ($115 for 1974-75), the amounts of the deficits are relatively small.

Number and percentage of institutions reporting deficits, by Carnegie Commission categories. The second method of analyzing operating deficits gives a more detailed picture of deficit trends. The results for private institutions are shown in Table 12 on page 35. The last line of the table indicates the number and percentage in the total ACE sample of 226 private institutions that reported an excess of expenditures over revenues during each of the three years, 1972-1975. Approximately one-third of the private institutions reported operating deficits (actual or expected) for each of the three years (but not necessarily the same institutions every year).

There are wide, and not entirely consistent, differences among types of institutions in the percentage trends shown in Table 12. Three of the groups show progressive increases in the percentage of deficits over the three-year period: Comprehensive Universities and Colleges I and II, and Two-Year Colleges. Two of these three cases, however, show substantial declines in the median deficit from 1972-73 to 1974-75.

Table 11. Median Surplus or Deficit in Current Funds Revenues per FTE Student, by Carnegie Commission Categories[a]

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	$128	-$ 44	-$ 5	$ 93	$ 40	$185
Research Univ II	19	16	90	131	104	25
Doctoral Univ. I	185	-24	-0-	25	185	57
Doctoral Univ II	39	49	109	-13	55	63
Compr. U. & C. I	31	-3	-121	60	84	50
Compr. U. & C. II	76	163	81	49	1	-0-
Liberal Arts C. I	46	19	-56	NA	NA	NA
Liberal Arts C. II	169	51	178	NA	NA	NA
Two-Year Colleges	-2	63	-115	86	27	2

[a]A positive number signifies a median surplus of revenues over expenditures in current dollars per FTE student; negative numbers signify a median deficit of revenues under expenditures in dollars per FTE student. The revenue and expenditure values from which these differences were derived are shown in Appendix TABLE A-8.

Table 12. Private Institutions Reporting Deficits in Current Funds Revenues (Dollars in Thousands)

Type and Total Number of Institutions[a]	1972-73			1973-74			1974-75		
	No. (1)	Percent (2)	Median Amount (3)	No. (4)	Percent (5)	Median Amount (6)	No. (7)	Percent (8)	Median Amount (9)
Research Univ. I (12)	1	8.3	$325	3	25.0%	$ 504	2	16.7	$ 887
Research Univ. II (11)	5	45.5	528	3	27.3	1,892	4	36.4	1,157
Doctoral Univ. I (13)	6	45.2	625	6	46.2	348	6	46.2	456
Doctoral Univ. II (7)	-0-	-0-	-0-	-0-	-0-	-0-	2	28.6	252
Compr. U. & C. I (21)	5	23.8	216	7	33.3	213	11	52.4	368
Compr. U. & C. II (14)	2	14.3	239	3	21.4	15	4	28.6	88
Liberal Arts C. I (57)	16	28.1	129	20	35.1	199	15	26.3	167
Liberal Arts C. II (78)	29	37.2	88	31	39.7	97	29	37.2	179
Two-Year Colleges (13)	2	15.4	258	3	23.1	105	4	30.8	69
Total (226)	66	29.2%		76	33.2%		77	34.1%	

[a]The total number of institutions in the ACE sample is shown in parentheses after each category name. The percentage of the national total represented by each category sample was shown in Table 2.

Similar data for the public institutions are shown in Table 13 on the following page. The percentages showing deficits are considerably lower than was the case for private institutions; and there is a decline from 20.8 per cent for 1972-73 to 16 per cent for 1974-75. Furthermore, no significant "deficit" trend over the three-year period is apparent for any of the groups of public institutions.

By way of conclusion it should be noted that the use of "operating deficits" as an indicator of the financial condition of colleges and universities is open to serious question. Variations in accounting practices and in regulations governing the use of public funds make it difficult, and often impossible, to compare operating-fund balances of different institutions. Relatively large and recurring deficits, expecially in the case of private institutions, certainly can be symptomatic of serious financial distress; and several such instances were observed from the reports of individual institutions in this study. But relatively small and irregular deficits--especially those reported by public institutions--are probably insignificant as indicators of an institution's financial condition.

Student-Aid Deficits

The term "student-aid deficit" was used by the National Commission on the Financing of Postsecondary Education to designate an important symptom of growing financial pressure facing institutions and students during the five years preceding its report in 1973. The term refers to an excess of expenditures for student aid over revenues from funds restricted for that purpose. The funds with which to meet such "deficits" obviously would have to come from unrestricted income, which could have been used for other educational purposes. Such deficits were reported by the National Commission to have more than doubled between 1968-69 and 1971-72, and to have grown faster for public than for private institutions (18, p. 206).

Table 13. Public Institutions Reporting Deficits in Current Funds Revenues (Dollars in Thousands)

Type and Total Number of Institutions[a]	1972-73			1973-74			1974-75		
	No.	Percent	Median Amount	No.	Percent	Median Amount	No.	Percent	Median Amount
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Research Univ. I (21)	2	9.5	$3,064	2	9.5	$945	1	4.8	$991
Research Univ. II (16)	1	6.3	496	2	12.5	285	4	25.0	892
Doctoral Univ. I (23)	2	8.7	1,276	3	13.0	209	3	13.0	209
Doctoral Univ. II (12)	4	33.3	840	1	8.3	642	2	16.7	587
Compr. U. & C. I (32)	8	25.0	162	4	12.5	395	4	12.5	639
Compr. U. & C. II (8)	4	50.0	48	4	50.0	212	2	25.0	527
Two-Year Colleges (32)	9	28.1	41	4	12.5	342	7	21.9	41
Total (144)	30	20.8%		20	13.9%		23	16.0%	

[a]The total number of institutions in the ACE sample is shown in parentheses after each category name. The percentage of the national total represented by each category sample was shown in Table 2.

The National Commission measured the magnitude of the student-aid deficit for a given group of institutions by subtracting the aggregate of revenues restricted for student aid from total expenditures for that purpose. The resulting "deficit," if any, was then usually expressed as a percentage of total student-aid expenditures. Different groups could ostensibly then be compared in terms of such percentages. This procedure has the possibly serious limitation of giving undue weight to the data from large institutions (or to those with relatively large revenue or expenditure items for student aid). So it seemed desirable to use an alternative method in which both revenues and expenditures for student aid were expressed in terms of amounts per FTE student.

The detailed results secured by both methods are shown in TABLES A-9 (private institutions) and A-10 (public institutions) in the Appendix. The first part of each table presents the student-aid data in terms of total dollars, the second part in terms of median dollars per FTE student--by Carnegie Commission categories in both cases. The results derived by the two methods, for either public or private institutions, show fairly good agreement--both in terms of levels of the "Deficit/Expenditure" ratios and in terms of their trends over the three-year period. So the remainder of the discussion will be limited to data based on "median dollars/FTE student."

The "Deficit/Expenditure" ratio will serve as the principal measure of student-aid deficits for comparative purposes in the present analysis. These percentage values from both Appendix TABLES A-9 and A-10 have been reproduced in Table 14 on the following page.

Table 14. "Student-Aid Deficits" as Percentages of Student-Aid Expenditures[a,b]

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	52.3%	49.9%	45.9%	53.3%	63.9%	61.3%
Research Univ. II	50.5	66.1	65.0	33.9	38.0	39.5
Doctoral Univ. I	52.5	52.8	56.7	32.6	27.8	30.0
Doctoral Univ. II	59.8	36.1	36.8	41.2	30.0	32.0
Compr. U. & C. I	58.1	56.6	59.0	33.0	7.0	17.4
Compr. U. & C. II	41.6	50.9	59.4	2.1	-0-	2.1
Liberal Arts C. I	44.2	46.7	53.9	NA	NA	NA
Liberal Arts C. II	61.8	50.8	56.8	NA	NA	NA
Two-Year Colleges	-9.1	-0-	5.6	13.8	10.8	19.0

[a]The term "student-aid deficit" refers to an excess of student-aid expenditures over revenues from funds restricted in use to student aid.

[b]The percentages in this table are reproduced from Appendix TABLES A-9 (private institutions) and A-10 (public institutions), which show the detailed calculations by which they were derived. Both student-aid revenues and expenditures were divided by FTE enrollment for each institution before the medians by type of institution were computed.

Regarding the nine groups of private institutions, there is a mixture of increasing and decreasing trends in the magnitudes of deficit/expenditure ratios over the three-year period. Omitting the two-year colleges, which reported virtually no such deficits, five of the other eight types show higher indices of student-aid deficits for 1974-75 than for 1972-73, but in only two cases were the increases substantial: (a) Research Universities II, from 50.5 to 65.0 per cent; (b) Comprehensive Universities and Colleges II, from 41.6 to 59.4 per cent. Of the three declining indices, one was quite marked: Doctoral Universities II, from 59.8 per cent for 1972-73 to 36.8 per cent for 1974-75.

Generalizing broadly from the figures in Table 14, it appears that private institutions as a group tended to maintain allocations of unrestricted income for student aid at a level of more than 50 per cent of student-aid expenditures--despite increasing inflation and other financial pressures between 1972-73 and 1974-75. Furthermore, the indices of student-aid deficit are much higher than those reported for private institutions by the National Commission, whose deficit/expenditure ratio was 30 per cent for 1971-72, and varied from 38 to 44 per cent during the period 1968-1971 (18, p. 207).

The data for public institutions in Table 14 show considerable variation among Carnegie Commission types. Research Universities I report deficit/expenditure ratios generally higher than the counterpart values for private institutions <u>in percentage terms</u>. But, as the figures in Appendix TABLES A-9 and A-10 show, the dollar levels involved are far higher for private than for public Research Universities I. Except for two-year colleges, other types of public institutions have lower indices of student-aid deficits than do private institutions. Furthermore, the dollar amounts per student are far below the levels for the private institutions in all categories (see TABLES A-9 and A-10).

VI. THE EFFECTS OF INFLATION

Bowen (3) has recently written a succinct commentary on the combined impact of inflation and recession on higher education, in which he noted particularly the striking reversal during 1973-74 of the historic relationship between price increases in higher education and those in the national economy. Higher-education prices had regularly increased at higher rates than those for the economy as a whole until 1973-74; but in that year, the Consumer Price Index showed a substantially higher percentage increase than Halstead's Higher Education Price Index (14). The consequences of these and collateral economic pressures upon colleges and universities are very effectively summarized in Bowen's article.

The present report carries the comparison of the two types of price indices through 1974-75, with the addition of other price-index series for both sectors. A second major problem will be the analysis of the effects of inflation upon expenditures in different types of institutions during the period 1972-1975.

Comparison of Price Indices for Higher Education with Those for the National Economy

June O'Neill made the first comprehensive study of price trends in higher education as part of her investigation of resource use for the Carnegie Commission on Higher Education--covering the period from 1929-30 through 1967-68 (20). So little prior work had been done on this problem, in fact, that when she sought data on the classification of the objects of institutional expenditures she could only find a set of broad categories and percentages published by Millett in 1952 (15): (a) faculty salaries, 43%; (b) non-faculty salaries, 28%;

(c) supplies and services, 29%. Using these "weights," and price indices from standard sources as "proxy" indices, O'Neill was able to construct separate price-index series for each of these components and to combine them into a composite price index for instructional costs. (She excluded both sponsored-research and public-service expenditures--as well as pro rata shares of identifiable indirect-cost expenditures--from the data base used in constructing her price index.)

Unfortunately, an hiatus of several years occurred following O'Neill's pioneering effort, during which no one attempted to update or improve her index series. The Consumer Price Index was likely to be used as a deflator for higher-education expenditures--or the GNP Implicit Price Deflator--even though June O'Neill's work showed clearly that price changes in higher education were at markedly higher rates than those for consumer prices. (The lack of an up-to-date price index "tailor-made" for higher education might have accounted partly for the failure of the National Commission on the Financing of Post-secondary Education to consider inflation in its search for indicators of financial distress--although it would have been relatively easy to up-date O'Neill's index and the use of it would have added a valuable dimension to the National Commission's analysis.)

In any event, several efforts have been made in recent years to develop deflators for different aspects of higher-education expenditures, and the resulting price indices have been assembled in Table 15 on the following page, along with three parallel price indices for the national economy. All of the series have been converted to a common fiscal-year base (1963-64 = 100).

Table 15. Price Indices for Higher Education and for the National Economy (FY 1963-64 = 100)[a]

Fiscal Year[b]	Higher Education Price Indices					National Economic Price Indices[d]		
	Halstead Instruction Price Index (14)	O'Neill Instruction Price Index (20)[c]	USDC-BEA Pvt. Higher Ed. Price Index (4)	Wynn Private 4-yr Coll. Deflator (22)	NSF R & D Price Index (19)	GNP Implicit Price Deflator (11)	Consumer Price Index (11)	Wholesale Price Index (11)
1963-64	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1964-65	104.3	104.8	106.4	103.7	103.2	101.7	101.5	101.2
1965-66	109.5	109.5	112.2	108.1	106.8	104.1	103.9	103.8
1966-67	115.2	115.2	117.6	113.5	111.4	107.2	106.8	105.6
1967-68	122.1	122.1	124.3	119.6	116.7	111.1	110.6	107.1
1968-69	130.4	129.9	131.6	127.2	122.5	116.0	115.9	110.5
1969-70	139.4	137.7	139.7	136.3	129.2	122.0	122.5	114.7
1970-71	148.3	145.5	147.7	144.6	136.4	128.0	128.7	118.6
1971-72	156.5	152.1	154.5	151.7	NA	133.1	133.6	123.2
1972-73	164.5	160.4	161.9	160.1	NA	139.1	140.0	134.1
1973-74	176.0	178.4	NA	NA	NA	150.2	152.1	155.8
1974-75	191.2	193.8	NA	NA	NA	165.6	168.1	179.9

[a]The sources of these price indices are given in the bibliography, to which reference is made by the parenthetical numbers in the column headings. See footnote (d) on the 1974-75 economic price indices.

[b]The price indices issued by federal agencies are published by the calendar year, except for the current year (when monthly or quarterly figures are given). These values have been converted to a fiscal-year basis (July 1 to June 30) as follows: (a) for 1973-74 and earlier, by averaging values for contiguous calendar years; (b) for 1974-75, by averaging the monthly or quarterly indices for the entire fiscal year.

[c]O'Neill's own price-index series for instructional expenditures ended with 1967-68. The values for the following seven years have been computed by Charles Andersen of ACE, using the assumptions as to expenditure composition and the price-change "proxies" specified by O'Neill (20).

[d]The economic price indices for 1974-75 have been derived by averaging the appropriate monthly or quarterly indices published in Economic Indicators by the Council of Economic Advisors (10).

As footnote (a) to the table indicates, the source of each deflator series is specified by the bibliographical reference given by a number in parentheses in the column heading.

Comparisons among higher-education price indices. Considering the higher-education indices in Table 15 as a group, there is fairly close correspondence between the first four series (those for Halstead, O'Neill, USDA-BEA, and Wynn) from the base year through 1972-73--despite substantial variations in methodology, assumed expenditure distribution, program coverage, and type of institution. The fact that the same or similar sources of staff-compensation data were used in these series--and that salaries and wages constitute by far the largest component of higher-education expenditures--probably is the main factor underlying this high degree of correspondence.

The deviant higher education deflator is NSF's "R&D" price index, which lags consistently behind the other four from 1963-64 through its terminal year (1970-71). Although no precise comparison of expenditure components is possible from available data, it seems likely that the R & D data base might have included a lower proportion of salaries than the other four, which have historically increased at higher rates than non-personnel costs. Furthermore, although the implications for the price-index differential at issue aren't clear, it might be noted that the NSF index was based only on expenditures reported by academic science departments and hence included no non-departmental indirect costs.

Attention will be focussed particularly on the Halstead and the O'Neill series since they both are designed to measure inflation in instructional costs, and since these two offer the best choices for deflators in this study.

But they do differ substantially in the overall weighting of the personnel and the non-personnel items; and unlike O'Neill, Halstead includes public service and all indirect-cost expenditures in his data base. Neither of these factors appeared to produce any appreciable disagreement between the two series through 1968-69 (when the respective price indices were 130.4 and 129.9). After that, Halstead's index begins to increase more rapidly through 1972-73 (when it was 164.5 versus 160.4 for O'Neill's). Then O'Neill's index jumped ahead during the past two years; and for 1974-75 it was 193.8, in comparison with 191.2 for Halstead's index. It seems probable that these fluctations reflect both the differing weights given to the personnel components in the two series (82 per cent for Halstead's and 71 per cent for O'Neill's), and to differential weighting among critical items in the non-personnel components. These interrelationships will be clarified by a brief discussion of the three national-economy deflators and then by a more specific analysis of how the two sets of higher-education indices might be differentially affected by price changes among components of price indices for the national economy.

Price indices for the national economy. The three series shown in Table 15 are the principal indices developed by two federal departments to measure inflation in the national economy: the GNP Implicit Price Deflator, the Consumer Price Index (CPI), and the Wholesale Price Index (WPI). A comparison of the first two series shows that their index numbers agree very closely until 1972-73, when the CPI begins to increase somewhat more rapidly than the GNP deflator, reaching 168.1 for 1974-75 versus the GNP's 165.6. But the correspondence is close enough to justify using the CPI as representative of the two series for purposes of the kind of comparisons to be made with the WPI and with the higher-education indices.

The changes in the WPI have differed substantially in pattern from those of the other two deflators. It first lagged considerably behind them, especially between 1966-67 and 1971-72; but since then the WPI has jumped ahead rapidly to reach 179.9 by 1974-75. The heaviest contributor to this extraordinary increase has been the "crude materials" component which includes petroleum, coal, and mineral products. The price indices for this group relative to the base year 1963-64 were: (a) for 1972-73, 143.2; (b) for 1973-74, 187.2 (30.7% increase); (c) for 1974-75, 225.1 (20.2% increase).

Comparison of higher-education with general-economic deflators. The price indices in Table 15 provide a ready inspectional basis for comparing price changes in higher-education with those in the national economy. For example, over the decade 1964-1974, higher-education prices as measured by Halstead's index, increased some 76 per cent above the base year, whereas the CPI's increase was about 50 per cent. And a similar differential had prevailed over the preceding 40-odd years--in varying magnitudes--as O'Neill's study and others have shown (5, 20). The higher rates of price increases for higher education had been due to its labor-intensive nature and to its inability to offset price increases by productivity gains, as goods-producing industries had been able to do.

But the price indices shown in Table 15 indicate that this historic pattern has recently changed. In order to display and measure the varying growth rates, it is necessary to make comparisons in terms of year-to-year percentage changes. Such data are presented in Table 16 on the following page.

Table 16. Annual Percentage Changes in Price Indices for Higher Education and for the National Economy[a]

Fiscal Year	Higher Education Price Indices					National Economic Price Indices		
	Halstead Instruction Pr. Index (1)	O'Neill Instruction Pr. Index. (2)	USDC-BEA Pvt. H. Ed. Pr. Index (3)	Wynn Pvt. Coll. Pr. Index (4)	NSF R & D Pr. Index (5)	GNP Defla-tor (6)	Consumer Price Index (7)	Wholesale Price Index (8)
1963-64	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
1964-65	4.30	4.80	6.40	3.70	3.20	1.70	1.50	1.20
1965-66	4.99	4.49	5.45	4.24	3.49	2.36	2.37	2.57
1966-67	5.21	5.21	4.81	5.00	4.31	2.98	2.79	1.73
1967-68	5.99	5.99	5.70	5.37	4.76	3.64	3.56	1.42
1968-69	6.80	6.39	5.87	6.36	4.97	4.41	4.79	3.18
1969-70	6.90	6.01	6.16	7.15	5.47	5.17	5.70	3.80
1970-71	6.39	5.66	5.73	6.09	5.57	4.92	5.06	3.40
1971-72	5.53	4.54	4.60	4.91	NA	3.98	3.81	3.88
1972-73	5.11	5.46	4.79	5.54	NA	4.51	4.79	8.85
1973-74	6.99	11.22	NA	NA	NA	7.98	8.64	16.18
1974-75	8.64	8.63	NA	NA	NA	10.25	10.52	15.47

[a]These percentages were derived from the price indices shown in Table 15. Each percentage value indicates a percentage increase in the index for the preceding year. The base year was FY 1963-64, as indicated by the numeral "100" in parentheses for that year.

The discussion of Table 16 will be focussed on the Halstead and O'Neill indices for higher education, and on the Consumer Price Index and the Wholesale Price Index for the national economy. The percentage-change values for these four sets of indices clearly show the kind of reversal of the "historic" relationship that has occurred between inflation rates in higher education and those in the national economy. The following comparisons of Halstead's HEPI with the CPI illustrate the nature of the change:

	1964-73[a]	1973-74	1974-75
Halstead HEPI	5.69%	6.99%	8.64%
Consumer Price Index	3.82%	8.64%	10.52%
Excess of HEPI	1.87%	-1.65%	-1.88%

It was suggested earlier that the considerably higher inflation rate shown by the O'Neill index than by Halstead's since 1972-73 probably was due to the greater "weight" given to non-personnel expenditures by O'Neill (29 per cent versus Halstead's 18 per cent). Further, the O'Neill index reflects a weight of about 10 per cent for fuel costs in contrast to only 3 per cent allowed in the "market basket" for Halstead's HEPI. This difference probably was largely responsible for the disparity in percentage increase between the two indices from 1972-73 to 1973-74 (6.99 per cent for Halstead's HEPI and 11.22 per cent for the O'Neill index).

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[a]The percentage-increase values for the HEPI and the CPI in this column are annual averages for the period 1964-73.

In view of the O'Neill index's greater sensitivity to price changes in fuel and other "crude materials," it will be of some interest to compare percentage changes in it with those for the WPI, as follows:

	1964-73	1973-74	1974-75
O'Neill's Price Index	5.39%	11.22%	8.63%
Wholesale Price Index	3.34%	16.18%	15.47%
Excess of O'Neill Index	2.05%	-4.96%	-6.84%

The main purpose of the foregoing analysis has been to show how price changes in the national economy have impacted generally upon institutions of higher education, as indicated by the behavior of higher-education price indices. But there are important methodological implications for future price-index studies in higher education to be drawn from the Halstead-O'Neill vis-a-vis the CPI-WPI comparisons--the principal one being that a single "market basket" with fixed weights derived from an earlier, stabler period might lead to serious misinterpretation of the impacts of inflation upon higher education in a period of marked price instability--and especially to misjudging the effects of using such a static index series to deflate the expenditures of different types of institutions.

Effects of Inflation upon Different Types of Institutions

The choice of a deflator. Only two higher-education price indices were available covering the three-year period of the present study. Halstead's HEPI and the ACE-updated version of June O'Neill's price index. Both were developed from data bases that combined expenditures for all types of institutions. It might seem questionable, therefore, whether such indices could justifiably be used as deflators for institutions ranging from research universities

to two-year colleges. On the other hand, the fairly high degree of correspondence noted earlier among four of the five higher-education deflators shown in Table 15 could be cited as evidence against the need for distinctive sets of price indices for different types of institutions.

In any event, however desirable it might be to have a special price index for each type of institution, such indices do not exist. So it was decided to use Halstead's Higher Education Price Index (HEPI) for the deflation of E&G expenditures in the present study. The index numbers used were taken from a January 1975 manuscript version of the monograph later published and which contained the HEPI series included in Table 15 (14). Certain of the figures in the latter were slightly changed from those in the earlier version (164.5 instead of 165.0, for 1972-73; and 176.0 instead of 176.3, for 1973-74).

Since the HEPI series did not extend to 1974-75 at the time our data were being processed, it was necessary to assume a percentage increase for 1974-75. At that time, an increase of 10 per cent above the 1973-74 value of 176.3 seemed reasonable, which gave an estimated index number of 193.9 for 1974-75. However, the actual increase turned out to be only 8.64 per cent (from 176.0 to 191.2) as shown in the Halstead series in Tables 15 and 16. It is interesting that the estimated HEPI index of 193.9 happened to be virtually identical with the calculated O'Neill figure of 193.8 for 1974-75. Considering the failure of Halstead's index to give sufficient weight to fuel and related products, and in view of the much greater weight given to them in O'Neill's index, the use of what amounted to the latter's 1974-75 figure as our deflator may have been a fortunate overestimate.

In sum, the specific price-index values used to convert current-dollar expenditures to constant (1963-64) dollars for the three fiscal years covered by the present study were the following: (a) for 1972-73, 165.0; (b) for 1973-74, 176.3; (c) for 1974-75, 193.9.

The measurement of trends in rate of expenditure change. In order to compare the effects of inflation upon the expenditures of different types of institutions, it was necessary to select: (a) one or more units of expenditure for individual institutions and for groups of institutions; (b) indices of changes in these measures over time.

In conformity with practice in the preceding analyses, the institutional unit chosen was "expenditure per FTE student." The median of such values is the measure used as the average expenditure for each type of institution in the Carnegie Commission classification (private and public). Such current-dollar medians have been calculated for each of the three fiscal years. These medians were then converted into constant (1963-64) dollars by use of the price deflators given above. Both sets of medians have been compiled into Appendix TABLE A-11, by type and control of institution.

Year-to-year percentage changes in the group medians would have provided one kind of index of trends in E&G expenditures per student. But for reasons given in the discussion of revenue trends, it was decided to use the more precise method of computing the median of the percentage changes for the individual institutions within a Carnegie Commission category. The latter type of percentage value, for both current and constant dollars, is shown in Table 17 on the following page.

Table 17. Median Percentage Change in Educational-and-General Expenditures per FTE Student by Type and Control of Institution--Current and Constant (1963-64) Dollars

Type of Institution	Private Institutions				Public Institutions			
	Current Dollars		Constant Dollars[a]		Current Dollars		Constant Dollars[a]	
	FY 1973 to 1974 (1)	FY 1974 to 1975 (2)	FY 1973 to 1974 (3)	FY 1974 to 1975 (4)	FY 1973 to 1974 (5)	FY 1974 to 1975 (6)	FY 1973 to 1974 (7)	FY 1974 to 1975 (8)
Research Univ. I	4.7%	5.8%	-2.0%	-3.8%	5.9%	5.9%	-0.9%	-3.7%
Research Univ. II	1.7	1.5	-4.8	-7.7	7.8	5.9	0.9	-3.5
Doctoral Univ. I	5.1	4.2	-1.7	-5.3	10.3	8.6	3.2	-1.3
Doctoral Univ. II	10.6	4.0	3.5	-5.5	8.1	5.8	1.2	-3.8
Compr. U. & C. I	6.3	4.8	-0.5	-4.8	9.4	8.8	2.4	-1.0
Compr. U. & C. II	9.2	7.8	2.2	-2.0	10.2	4.6	3.2	-5.0
Liberal Arts C. I	6.0	5.5	-0.8	-4.1	NA	NA	NA	NA
Liberal Arts C. II	7.8	4.8	0.8	-4.6	NA	NA	NA	NA
Two-Year Colleges	15.6	3.8	8.1	-5.6	3.4	8.6	-3.2	-1.4

[a]The deflators for 1972-73 and 1973-74 came from Halstead's unpublished manuscript (January 1975), the indices being 165.0 and 176.3 (1963-64 = 100). The index for 1973-74 was increased by 10 per cent to derive an estimated value of 193.9 for 1974-75, which was used in this report to deflate the 1974-75 expenditure data. See Table 15 and the text for Halstead's later revision of the HEPI.

Comparison of current-dollar percentage changes in E&G expenditures per student with changes in the Consumer Price Index (CPI). Although the impact of inflation upon higher education is indicated most directly by the constant-dollar data in Table 17, comparisons will first be made between current-dollar increases in E&G expenditures and increases in the CPI for the corresponding years shown in Table 16. This type of comparison has been made in several of the Carnegie Commission's studies of the financial condition of higher-education.

In the first column of Table 17, only three of the nine groups of private institutions show median percentage changes in E&G expenditures per student for 1973-74 greater than the 8.64 per cent increase in the consumer price index. In the case of the seven groups of public institutions, three of them have increases in column (5) that exceed the CPI rate. Thus, both private and public institutions had average increases in expenditure per student that were below the CPI's increase for 1973-74--although there was considerable variability by type of institutions within the private and public sectors. None of the types of private or public research universities, however, had an average expenditure increase per student exceeding the CPI's percentage increase.

Similar comparisons for 1974-75 show that none of the Carnegie Commission categories of institutions--public or private--had increases as high as the CPI's 10.52 per cent. The percentage range for the nine private groups was from 1.5 to 7.8 per cent; that for the seven public groups was from 4.6 to 8.8 per cent.

These relationships are a far cry from the trends reported in several Carnegie Commission studies:[7]

> June O'Neill's data (20) have been analyzed by the Carnegie Commission staff to show that over the 30-year period from 1930 to 1960, instructional costs per credit hour rose 2.5 per cent faster than the average increase in the Consumer Price Index (5, pp. 2,3,12).
>
> The Carnegie Commission staff estimated also that costs per student increased during the 1960's to an annual rate of 3.4 per cent above the "general rate of inflation," and strongly urged a reduction at least to the "historic" excess of 2.5 per cent (5, pp. 7-13).
>
> Cheit's two studies showed that between 1970 and 1972, his 41 institutions had virtually eliminated the differential between their rate of expenditure increase per student and the average annual increase in the consumer price index (8, 9). Whereas during the four-year period 1966-1970 these institutions averaged 3.9 per cent above the CPI (8, 106-107), for the period 1969-1973 the excess was only 0.5 per cent and "three of the institutions actually had a negative rate-of-expenditure growth for the period" (9, pp. 53-55).

Constant-dollar changes in E&G expenditure per FTE student, for Carnegie Commission categories of institutions. The results of the direct measurement of the effects of inflation upon E&G expenditures of different types of institutions are shown in Table 17, in the columns of percentage-change values headed "Constant Dollars."

The method for deriving these values was as follows: (a) the amount of E&G expenditures per FTE student for each fiscal year was determined for each institution; (b) these institutional averages were reduced to constant dollars

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[7]The present study included all HEGIS "Educational and General" expenditures in the derivation of its indices of unit rate increases; whereas in the Carnegie Commission studies, expenditures were limited to instructional costs. But this does not vitiate general comparisons of our inflation measures and trends with similar results of those studies.

by use of the Halstead HEPI (with an estimated 10 per cent increase for 1974-75); (c) the percentage change in an institution's constant-dollar expenditure per FTE student was calculated for 1973-74 (change from 1972-73), and for 1974-75 (estimated change from 1973-74); (d) the median of these percentage-change values was calculated for each of the Carnegie Commission categories (private and public), and these are the percentages that appear in Table 17.

Private institutions. The percentage-change values in column (3) of Table 17 show that five of the nine groups of private institutions reported constant-dollar decreases in E&G expenditures per student for 1973-74. The declines ranged from -0.5 per cent for Comprehensive Universities and Colleges I to -4.8 per cent for Research Universities II.

The four increases in real-dollar expenditure growth ranged from 0.8 per cent for Liberal Arts Colleges II to 8.1 per cent for Two-Year Colleges. The latter figure seems extraordinarily high, especially since this group also reported a -3.8 per cent decline in enrollment for 1973-74 (see Table 4, p. 16). However, the drop in enrollment (with a reduction in tuition-and-fee revenue) could have resulted in relatively higher E&G revenues per student for the smaller enrollment, since T&F revenues produced only 62.4 per cent of the average E&G revenues reported by private two-year colleges (see Table 10, p. 29). The puzzle cannot be solved from available data; and perhaps the main lesson to be learned from this type of finding is that unusual caution should guide any effort to interpret anomalous trend data--especially when a very short period of time is involved.

The constant-dollar changes estimated for 1974-75 show that all nine groups of private institutions reported negative rates of growth in E&G expenditures per student. As the figures in column (4) of Table 17 show, the expected decreases ranged from -2.0 per cent to -7.7 per cent. The sharpest decline was again reported by Research Universities II, making a cumulative two-year loss of more than 12.5 per cent in real-dollar expenditure per FTE student.

The constant-dollar data in Table 17 for Liberal Arts Colleges I may be compared with results reported by Wynn for a similar group of 48 institutions. Using a provisional version of a deflator then under development (22), he reported the following year-to

year growth rates in E&G expenditures per student (21, p.23):

1969-70	1970-71	1971-72	1972-73
2.7%	1.3%	-0.9%	-1.0%

The present study's "continuation" figures for Liberal Arts Colleges I in 1973-74 and 1974-75 are -0.8 and -4.1 per cent, respectively.

Public institutions. The constant-dollar data in column (7) of Table 17 show that two of the seven groups of public institutions reported negative E&G expenditure growth rates for 1973-74 (-0.9 per cent for Research Universities I and -3.2 per cent for Two-Year Colleges). The other five groups have small increases ranging from 0.9 to 3.2 per cent.

For 1974-75, however, all seven of the public groups estimated decreases in E&G expenditures per FTE student--ranging from -1.0 per cent for Comprehensive Universities and Colleges I to -5.0 per cent for Comprehensive Universities and Colleges II.

The largest net cumulative declines over the two-year period, approaching -5.0 per cent in each case, are those for Research Universities I and Two-Year Colleges. In the case of the latter, it seems reasonable to assume that the heavy enrollment increases (reported in Table 4 as 5.4 and 5.0 per cent for the two years), without proportionate gains in revenue, were major factors in reducing E&G expenditures per FTE student. Price inflation also was undoubtedly a heavy contributor.

The public Research Universities I had no large enrollment increases to cope with (the increases were 1.9 and 0.5 per cent for the two years). Their negative expenditure growth-rate undoubtedly was due largely to a combination of cost inflation and "recession" in revenue.

VII. THE DISTRIBUTION OF EXPENDITURES BY FUNCTION

Institutions participating in the ACE survey were asked to report total Educational-and-General (E&G) expenditures for each of the three fiscal years, and also to show breakdowns into the following functional sub-classes:

1. Instruction and Departmental Research
2. Organized Activities Related to Educational Departments
3. Sponsored Research
4. Other Separately Budgeted Research
5. Other Sponsored Programs
6. Extension and Public Service
7. Libraries
8. Physical Plant Maintenance and Operation
9. Other Educational and General

The data for each type of function were aggregated for each Carnegie Commission category of institutions (private and public) and these amounts were divided by the total E&G expenditures--to give the percentage of E&G funds expended for each of the nine functions. In addition, composite percentage distributions were computed for all private institutions combined and for all public institutions.

The data are presented in two general tabular formats: first, the percentage of E&G funds expended for each of the nine functions is shown, by type of institution and fiscal year; second, for each type of function, percentage values for all categories of institutions have been assembled within a single table. These tabular arrangements facilitate two corresponding types of analysis: (a) variations in patterns of expenditure distribution by function, among different types of institutions (private and public); (b) variations among types of institutions in percentage allocations for selected sub-classes of E&G expenditures. In these complementary kinds of

analysis, a major purpose will be to determine whether the growing financial pressures of the past three years have affected either the pattern of E&G expenditure distribution among functions or the percentage allocations of different types of institutions for a given function.

Patterns of E&G Expenditure Distribution by Function

The general type and form of the data to be presented as "patterns" in this section are illustrated in the following table:

Table 18. Percentage Distribution of Educational-and-General Expenditures by Function

Type of E&G Expenditure	All Private Institutions			All Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Instruction & Dept. Res.	38.7%	39.2%	40.0%	43.8%	43.4%	43.6%
Organized Activities (Ed.)	6.9	6.8	7.0	3.4	4.3	4.3
Sponsored Research	15.9	15.4	14.6	12.1	11.4	11.0
Other Budgeted Research	0.5	0.4	0.4	3.8	3.6	3.6
Other Sponsored Programs	5.7	5.1	5.0	6.1	6.1	5.9
Extension & Public Serv.	0.7	0.7	0.7	5.1	5.1	5.1
Libraries	4.3	4.2	4.2	3.8	3.9	3.8
Physical Plant	9.3	9.6	9.7	9.3	9.3	9.4
Other Educ. & General[a]	18.0	18.6	18.4	12.6	12.9	13.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]The item "Other Educational and General" includes expenditures for the general executive and administrative offices, student services, and other educational and general purposes not reported under the preceding "Educational-and-General" categories.

It is obvious from inspection of the percentage distributions for all private institutions combined that the patterns are markedly stable from year to year. Over the three-year period, there is a slight increase in the proportion of funds expended for instruction and department research, and a somewhat larger proportionate decline in expenditures for sponsored research.

The percentage distributions of E&G funds for the public institutions likewise are highly stable from year to year. Sponsored research shows a small decline similar to that noted for the private institutions. The only consistent increases in the public sector occur in general administrative ("Other Educational and General") expenditures, but they too are small.

The most striking difference between private and public institutions is the former's much higher proportion of funds allocated for general administrative purposes. Over the three-year period, the private institutions assigned 18.0, 18.6, and 18.4 per cent of their E&G funds to this category while the corresponding figures for the public institutions are 12.6, 12.9, and 13.3 per cent.

In order to make more detailed comparisons of the allocation patterns of the two sectors, and to examine the variability among different types of institutions within each of them, tables in the format of Table 18 have been assembled in the Appendix for each Carnegie Commission category. Each table includes parallel sets of data for private and public institutions, except that TABLE A-18 has data for private Liberal Arts Colleges I and II, there being no public counterparts in the ACE sample. Beginning with Research Universities I, the results will be discussed briefly in the order in which the Carnegie Commission categories have appeared in earlier tables.

Research Universities I (Appendix TABLE A-12). Private institutions in this category show a distinctive pattern of E&G expenditure distribution which is highly stable over the three-year period and differs significantly from the patterns for all private institutions combined in Table 18. Sponsored research receives a far higher, and instruction a somewhat lower, proportion of E&G funds than Table 18 shows for all private institutions. General administrative costs for Research Universities I represent about 10

per cent of E&G expenditures whereas all private institutions combined expend 18 per cent for these purposes. Physical plant expenditures likewise are somewhat lower for the Research Universities (7+% versus 9+% for all private institutions). The last two differences are due partly to economies of scale resulting from the relatively larger enrollments and greater diversity of programs in Research Universities I.

A fairly high degree of similarity is shown in TABLE A-12 between the private and public patterns of E&G expenditures for the top level research universities; but there are significant differences: the private institutions spend relatively less for instruction and departmental research, substantially more for sponsored research, a somewhat higher percentage for libraries, and only about a fifth as much (in percentage points) for extension and public service. In the case of "Sponsored Research," it should be noted that the private-public difference is greatly reduced if this category is combined with "Other Budgeted Research." The composite percentages become approximately 26 per cent for private and 21 per cent for public universities. (The funds reported as "Other Budgeted Research" by the public institutions in this category consist heavily of state and federal appropriations for agricultural research, which aren't classified as "Sponsored Research" in the HEGIS system.)

Research Universities II (Appendix TABLE A-13). The expenditure patterns for both private and public Research Universities II are significantly different from corresponding patterns for Research Universities I: (a) considerably higher percentages of funds go for instruction and correspondingly less for research; (b) costs of general administration and physical plant require relatively more of the E&G budget; (c) much lower proportions are allocated for "organized activities related to educational departments."

The expenditure percentages for private and public institutions in this category, shown in TABLE A-13, are in fairly close agreement for instruction, research (combined categories), and physical plant. Public institutions allocate approximately 10 per cent of their funds for extension and public service, in contrast to less than 1 per cent for the private institutions. General administrative costs are relatively much higher in the private sector.

Regarding year-to-year changes in patterns of expenditure distribution, the general picture is one of stability. There is a slight trend towards percentage increases for physical plant and for general administration and declines for research, in both private and public institutions.

Doctoral Universities I (Appendix TABLE A-14). The private institutions in this category show a trend towards increased expenditures for instruction (from 43.4 per cent in 1972-73 to 46.1 per cent in 1974-75), and a parallel decrease in allocations for research. These private institutions resemble Research Universities II in overall pattern of expenditure distribution, with slightly higher percentages for instruction and lower proportions for research (as would be expected from the criteria used by the Carnegie Commission in creating the two classes).

Public Doctoral Universities I show little change in expenditure pattern over the three-year period--the greatest percentage change being from 14.3 to 15.3 per cent for general administration. Their differences from public Research Universities II are somewhat parallel to those just described for the private sector: relatively more funds for instruction, less for research. Also, public Doctoral Universities I show higher percentages for physical plant (e.g., 10.3 vs. 8.2 per cent for 1973-74) and for general administration (e.g., 14.4 vs. 13.2 per cent for 1973-74).

The private-public differences in expenditure patterns shown for Doctoral Universities I in TABLE A-14 are quite similar to those noted for Research Universities II, except that the public institutions in the former group expend proportionately less for research.

Doctoral Universities II (Appendix TABLE A-15). The allocation patterns for Doctoral Universities II, both public and private, are markedly different from those for Doctoral Universities I. Both private and public institutions of the former type spent more than 50 per cent of their E&G funds on instruction, in contrast to 43 to 46 per cent for the latter group. The proportions spent for research are far lower for the "II" than for the "I" category of Doctoral Universities.

The expenditure patterns for the private and public Doctoral Universities II are generally quite similar--except that the private institutions have higher percentages for general administrative costs than the public group (22 vs. 15 per cent); while the public percentages are higher for instruction, "other sponsored programs," and physical plant. The distribution patterns for both groups over the three-year period are remarkably stable.

Comprehensive Universities & Colleges I (Appendix TABLE A-16). The expenditure pattern for the private institutions in this category is so unusual as to raise a serious question as to the validity of the data for the first two E&G classes in TABLE A-16. For 1972-73, for example, 42.4 per cent is reported for "Instruction and Departmental Research" and 17.5 per cent for "Organized Activities

(Educ.)"; but for Doctoral Universities II the corresponding figures (in TABLE A-15) are 53.6 and 0.5 per cent. Further, the percentages for these two categories in TABLE A-17 (Comprehensive Universities and Colleges II) are 45.4 and 1.7 per cent (1972-73). It is conceivable that the private schools supplying the data for TABLE A-16 had unusually costly programs which they judged to be in support of instruction (such as laboratory schools for teacher education, recreational activities, dramatic productions, concerts, etc.). But the great disparity between this group and the others cited in these percentage allocations is difficult to understand.

The public institutions in this category have an expenditure pattern very similar to that for public Doctoral Universities II, with some 55 per cent of E&G expenditures allocated for instruction. And the total public pattern is generally stable over the three-year period.

Comprehensive Universities and Colleges II (Appendix TABLE A-17). The private and the public institutions in this category differ considerably in expenditure-distribution pattern, but within each group there is a high degree of stability over the three-year period.

The private institutions spend proportionately less on instruction than their public counterparts (45.4 versus 56.8 per cent for 1972-73), but a higher proportion on general administration (32.4 versus 17.6 per cent for that year). The public institutions had somewhat higher physical-plant costs (13.2 versus 10.7 per cent for 1972-73).

Liberal Arts Colleges I and II - Private (Appendix TABLE A-18). Since there were no public liberal arts colleges in the ACE sample, the data for both private groups of this type have been included in TABLE A-18. In general, their expenditure patterns are highly similar and are generally stable over the three-year period.

Their expenditures for instruction and departmental research range between 43.6 and 44.6 per cent, which are quite close to the percentages for private institutions in the three preceding categories (see TABLES A-15, A-16, A-17). General administrative costs for the two types of liberal arts colleges (30.6 and 31.5 per cent for 1972-73) are close to the value for Comprehensive Universities and Colleges II, but are markedly higher than the figure of approximately 19 per cent for Comprehensive Universities and Colleges I. Differences in size of enrollment and related "economy-of-scale" factors may account for these disparities.

Two-Year Institutions (Appendix TABLE A-19). The private institutions in this category show the lowest percentage allocation for instruction and the highest for general administrative costs among all other categories in the study: approximately 38.0 per cent for instruction and 37.7 per cent for administration in 1972-73. The allocations for instruction tended to decline slightly over the three-year period, as did those for administrative operations; but the differences are hardly significant. Expenditures for physical plant increased moderately from 13.4 to 15.8 per cent over the three-year period.

The public two-year colleges differed markedly from their private counterparts in allocating much higher percentages of funds for instruction and much lower proportions for administrative costs. For 1972-73, their figures for instruction were 38 per cent for private and 59 per cent for public institutions; for general administrative purposes, the percentages were 37.7 for private and 19.7 per cent for public two-year colleges.

Expenditures for Selected Functions by Type of Institution

The focus of discussion will now be shifted to variations among different types of institutions in the proportion of funds expended for particular kinds of functions. The data have been organized into eight tables--one each for seven of the nine sub-classes of E&G functions and a single table for the combined percentages for the two research categories ("Sponsored Research" and "Other Budgeted Research").

Instruction and departmental research. The percentages of E&G funds expended for this purpose by type and control of institution are presented in Table 19 on the following page, for the three fiscal years.

With a few minor exceptions, the data in Table 19 show a high degree of year-to-year stability in the proportion of E&G funds expended for instruction. Among the private institutions, six of the nine groups expected to spend higher percentages for this purpose in 1974-75 than in 1972-73; and six of the seven public groups reported lower percentages. But in all cases the differences are insignificant.

Table 19. Expenditures for Instruction and Departmental Research as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	31.6%	32.6%	33.3%	37.8%	37.8%	38.2%
Research Univ. II	40.1	40.7	41.1	42.7	41.9	41.7
Doctoral Univ. I	43.4	43.5	46.1	46.4	45.8	45.8
Doctoral Univ. II	53.6	52.3	53.5	56.9	55.6	55.2
Compr. U. & C. I	42.4	41.6	41.5	56.0	55.0	55.2
Compr. U. & C. II	45.4	46.1	46.8	56.8	55.8	55.3
Liberal Arts C. I	43.9	43.6	44.1	NA	NA	NA
Liberal Arts C. II	44.5	44.4	44.6	NA	NA	NA
Two-Year Colleges	38.0	36.3	36.4	59.0	58.1	56.8

Among the nine groups of private institutions, six of them reported percentage allocations for instruction ranging between 40 and 47 per cent. Doctoral Universities II was the only private group spending more than 50 per cent of its E&G funds on instruction. And the private institutions at the respective extremes of the Carnegie Commission spectrum show less than 40 per cent expended for instruction: Research Universities I (31.6 to 33.3 per cent) and Two-Year Colleges (36.3 to 38.0 per cent). Possible reasons for some of these variations may be suggested by comparisons of private with public institutions, by Carnegie Commission category.

There is fairly close agreement in Table 19, category by category, between the four groups of private and public universities in the percentages of E&G funds expended for instruction and departmental research. The greatest disparity occurs for Research Universities I, with private institutions averaging 32.5 per cent and public institutions 37.9 per cent. (This difference is corollary to the reverse differential of about the same magnitude in separately budgeted research.)

The really significant differences between the private and public sectors in proportional allocations for instruction lie with institutions primarily devoted to teaching. In all comparisons in Table 19, the public institutions expend more than 50 per cent of their E&G funds for instruction, while the corresponding values for the private groups are generally some ten percentage points lower. Averaging the percentages for the four-year "teaching" institutions for all three years yields approximately the following values: private institutions, 44 per cent; public institutions, 55 per cent. The disparity for the two-year colleges is even greater: 37 per cent for the private versus 58 per cent for the public institutions. Although interpretation of such differences is hazardous, major considerations probably include differences in size and other factors related to economies of scale--as well as in the special kinds of services and various other aspects of the predominantly residential communities of the private institutions.

Organized activities related to educational departments. A variety of activities conducted primarily in support of instructional programs are included under this heading (laboratory schools, psychological clinics, experimental

theatres, etc.). Because such units also provide community service or may serve other non-instructional purposes, inconsistencies may arise regarding the E&G expenditure category in which to report them. Hence, one cannot feel great assurance that the data reported in Table 20, shown below, reflect true differences among the several types of institutions in the kinds of activities intended by the HEGIS category and instructions. The extremely atypical percentages for private Comprehensive Universities and Colleges I as a possible illustration of such variability have already been discussed.

Table 20. Expenditures for Organized Activities Related to Educational Departments as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	11.1%	11.1%	11.6%	5.3%	7.2%	7.2%
Research Univ. II	1.8	1.9	1.9	1.7	1.6	1.6
Doctoral Univ. I	3.0	2.9	2.9	1.9	1.8	1.6
Doctoral Univ. II	0.5	0.5	0.6	1.8	1.9	1.9
Compr. U. & C. I	17.5	17.6	17.5	1.9	2.1	2.1
Compr. U. & C. II	1.7	1.8	1.7	0.7	1.3	1.3
Liberal Arts C. I	1.9	1.8	1.7	NA	NA	NA
Liberal Arts C. II	1.8	1.8	1.8	NA	NA	NA
Two-Year Colleges	4.5	4.7	5.0	0.2	0.2	0.2

Except for the latter category, Research Universities I, private and public, are the groups shown in Table 20 to have the heaviest percentages for these academic-support activities. It is interesting to note that under the

financial pressures of the past three years, the proportion of the E&G budget allocated to these functions not only has been maintained but has even been increased.

In general, the data in Table 20, for most of the groups, show a trend towards slightly increasing allocations for these instructional-support activities over the three-year span.

Separately budgeted research. The two separate research items in the E&G expenditure classification have been combined into composite percentages in Table 21 below.

Table 21. Expenditures for Separately Budgeted Research as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	26.9%	26.0%	25.0%	22.1%	20.8%	20.2%
Research Univ. II	19.3	18.2	17.3	18.2	17.4	17.3
Doctoral Univ. I	16.7	16.6	14.8	11.3	11.3	10.8
Doctoral Univ. II	4.9	4.4	4.5	3.8	3.8	3.9
Compr. U. & C. I	3.7	3.8	3.5	3.8	3.4	3.4
Compr. U. & C. II	0.8	0.6	0.8	2.6	2.5	2.4
Liberal Arts C. I	2.2	1.8	1.6	NA	NA	NA
Liberal Arts C. II	1.1	0.7	0.7	NA	NA	NA
Two-Year Colleges	-0-	-0-	-0-	0.1	0.1	0.1

It is evident from these data that only three types of institutions spend substantial proportions of E&G funds on research: Research Universities I and II, and Doctoral Universities I. In all three categories, private institutions

allocate somewhat higher percentages of funds for research than do their public counterparts, although for Research Universities II the differences are slight.

All three of these Carnegie Commission categories, public and private, show slightly declining proportions of funds expended for research from 1972-73 to 1974-75. A similar trend is observed for most of the other types of institutions (public and private).

Other sponsored programs. The funds in this functional category include training grants, federal "work-study" grants, workshops, and similar activities supported by grants, contracts, or other written agreements. The percentages of E&G expenditures for these purposes, by type of institution, are shown in Table 22 below.

Table 22. Expenditures for "Other Sponsored Programs" as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	8.5%	7.5%	7.5%	7.6%	7.4%	7.2%
Research Univ. II	7.3	7.1	6.6	4.3	4.5	4.3
Doctoral Univ. I	3.1	2.9	3.0	6.9	7.5	7.4
Doctoral Univ. II	2.3	2.1	1.9	4.2	4.2	4.1
Compr. U. & C. I	3.7	3.3	3.2	4.1	3.9	3.8
Compr. U. & C. II	3.5	3.0	2.3	2.7	2.[illegible]	2.1
Liberal Arts C. I	2.1	1.9	1.6	NA	NA	NA
Liberal Arts C. II	2.7	3.0	2.3	NA	NA	NA
Two-Year Colleges	1.0	0.8	0.2	3.4	3.4	3.1

The year-to-year percentage changes shown in Table 22 are small for all types of institutions (private and public), but there is generally a slight downward trend in percentage allocation for these activities. There are no shifts in the ranking of institutions over time in terms of size of expenditure percentage.

In general, the expenditure of research universities for these sponsored programs is heaviest among all Carnegie Commission types--with one exception: the unaccountably lower percentage for public Research Universities II (4.3 to 4.5 per cent) than for public Doctoral Universities I (6.9 to 7.5 per cent).

Extension and public service. The data in Table 23 below show that special expenditures for "extension and public service" are concentrated in the public universities--especially in the top three of the Carnegie Commission categories

Table 23. Expenditures for Extension and Public Service as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	0.9%	1.0%	1.0%	5.5%	5.5%	5.4%
Research Univ. II	0.3	0.3	0.3	9.9	9.5	9.9
Doctoral Univ. I	0.5	0.4	0.4	4.6	4.4	4.4
Doctoral Univ. II	0.6	0.8	0.8	1.3	1.6	1.7
Compr. U. & C. I	0.6	0.6	0.6	1.3	1.4	1.4
Compr. U. & C. II	0.5	0.4	0.4	0.7	0.8	0.7
Liberal Arts C. I	0.8	0.8	0.8	NA	NA	NA
Liberal Arts C. II	0.7	0.6	0.6	NA	NA	NA
Two-Year Colleges	0.9	0.9	1.0	1.4	1.5	1.5

(whose percentages range from 4.4 to 9.9 per cent). For the other public groups, less than two per cent of E&G funds are allocated for these purposes; and for all classes of private institutions, one per cent or less.

The year-to-year figures show little change in the proportions of E&G funds expended for extension and public service, by either public or private institutions.

One apparent anomaly in the data in Table 23 is the fact that the percentages for public Research Universities II are almost twice as high as those for Research Universities I (9.9 vs. 5.5 per cent for 1972-73). This disparity is complementary to the reverse differential in the case of Separately Budgeted Research (18.2 vs. 22.1 per cent for 1972-73 shown in Table 21.)

The relatively low percentage of funds expended for extension and public service by public two-year colleges might seem surprising--1.4 to 1.5 per cent over the three-year period--since these institutions presumably perform important "community-service" functions. The anomaly, if it be such, is probably explained by the fact that public two-year institutions usually classify as "instruction" most of their "community service."

Libraries. The relative level of support for libraries over the past three years has remained generally stable, by type of institution, as the expenditure percentages shown on the following page in Table 24 indicate. The percentage changes for both private and public institutions are very small.

Table 24. Expenditures for Libraries as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	4.2%	4.1%	4.0%	3.3%	3.4%	3.3%
Research Univ. II	3.9	3.8	4.0	3.8	3.7	3.6
Doctoral Univ. I	3.9	3.9	4.1	4.5	4.5	4.4
Doctoral Univ. II	5.2	5.1	5.0	4.9	5.3	5.2
Compr. U. & C. I	3.9	3.8	4.0	4.9	5.0	4.9
Compr. U. & C. II	5.1	5.0	5.0	5.7	5.8	5.9
Liberal Arts C. I	5.3	5.3	5.4	NA	NA	NA
Liberal Arts C. II	4.9	4.9	4.8	NA	NA	NA
Two-Year Colleges	4.4	4.5	4.3	4.1	4.2	4.1

Table 25. Expenditures for Physical Plant Maintenance and Operation as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	7.1%	7.7%	7.6%	8.1%	7.9%	7.9%
Research Univ. II	8.7	9.5	9.8	8.3	8.2	8.6
Doctoral Univ. I	9.7	9.2	9.2	10.2	10.3	10.4
Doctoral Univ. II	11.1	11.0	11.2	12.2	12.3	12.7
Compr. U. & C. I	9.4	9.7	10.0	11.4	11.8	12.0
Compr. U. & C. II	10.7	10.9	11.1	13.2	14.0	14.3
Liberal Arts C. I	13.2	13.5	14.0	NA	NA	NA
Liberal Arts C. II	12.9	12.6	12.9	NA	NA	NA
Two-Year Colleges	13.4	14.9	15.8	12.1	11.9	12.4

Physical plant maintenance and operation. These functions have been particularly critical areas for colleges and universities during the past two years, for the obvious reason that they have borne most directly the impacts of the "energy crisis" and the attendant inflation. The percentage data shown in Table 25 on page 71, however, do not provide any definitive clues as to the nature and magnitude of such impacts. (The latter have undoubtedly produced marked changes in the internal composition of physical-plant expenditures, with proportionately more going to meet "energy-related" cost and less for building maintenance and rehabilitation.)

Indeed, the year-to-year changes by type of institution are relatively small. Although the majority of them, from 1972-73 to 1974-75, are increases, the slight changes in most cases by no means reflect the pressures upon this area of institutional operations. The increases for private Two-Year Colleges (from 13.4 to 15.8 per cent) and Research Universities II (from 8.7 to 9.8 per cent) are exceptions. The general picture of "stability" presented by the percentages for the respective groups fails to reflect the economizing that has occurred in order to meet higher energy costs, including serious deferral of plant maintenance.

General administrative expenditures ("Other Educational and General"). The percentage allocations for general administrative purposes are shown in Table 26, on the following page.

Percentage changes in this category from 1972-73 to 1974-75 are relatively slight for all types of institutions. Overall, most of the Carnegie Commission groups show year-to-year increases, but in only two instances are they greater than one percentage point (public Research Universities II, from 11.1 to 13.0 per cent; and public Two-Year Colleges, from 19.7 to 21.8 per cent).

Table 26. General Administrative Expenditures as a Percentage of E&G Expenditures, by Carnegie Commission Categories

Type of Institution	Private Institutions			Public Institutions		
	1972-73 (1)	1973-74 (2)	1974-75 (3)	1972-73 (4)	1973-74 (5)	1974-75 (6)
Research Univ. I	9.7%	10.1%	10.1%	10.2%	9.9%	10.5%
Research Univ. II	18.5	18.5	19.1	11.1	13.2	13.0
Doctoral Univ. I	19.7	20.6	19.6	14.3	14.4	15.3
Doctoral Univ. II	21.9	23.8	22.5	14.8	15.3	15.3
Compr. U. & C. I	18.8	19.6	19.8	16.6	17.3	17.1
Compr. U. & C. II	32.4	32.2	31.9	17.6	18.0	18.0
Liberal Arts C. I	30.6	31.2	30.8	NA	NA	NA
Liberal Arts C. II	31.5	31.9	32.2	NA	NA	NA
Two-Year Colleges	37.7	37.9	37.3	19.7	20.5	21.8

Since expenditures for general administrative activities have probably felt a very heavy impact from the growing costs of compliance with federal regulations, the absence of appreciable increases in proportional allocations of funds for general administration suggests excess workloads and a general impairment of administrative services.

The data for the nine categories of private institutions in Table 26 may be classified approximately into three percentage levels: (a) 10 per cent for one group of institutions (Research Universities I); (b) 18-23 per cent for the next four groups in the Carnegie Commisssion "hierarchy"; 30-37 per cent for the last four groups in the table. These differences appear generally to be inversely related to institutional size, diversity, and complexity--all of which contribute to economies associated with scale of operations.

The seven categories of public institutions also vary substantially in the percentages of E&G funds expended for general administrative purposes. But their data in Table 26 show a narrower range, and generally lower levels, than the percentages of corresponding private groups. Regarding percentage level, however, there is one significant exception to the latter generalization: private and public Research Universities I have virtually identical figures of approximately 10 per cent. Although differing considerably in the "mix" of factors that contribute to overall economies of scale, the two groups nevertheless achieve equivalent relative levels of expenditure for this important type of "overhead" cost. But the other six categories of paired private-public percentages show a widening divergence as one reads downward in the columns of Table 26. The factors of size and diversity of programs--and possibly also a lower proportionate investment in student services--apparently enable public institutions to expend lower percentages of E&G funds in general administrative functions than their private counterparts.

VIII. CONCLUSIONS

The overriding conclusion from the present study and earlier evidence is that *progressive deterioration has* been occurring in the financial condition of higher education as a whole in recent years. Furthermore, the process of decline appears to have accelerated during the past three years under the joint influence of inflation and recession in the national economy.

Since the term "deterioration" in this context can be misleading, it needs to be defined operationally by reference to relevant data and assumptions. The publications of the Carnegie Commission on Higher Education are the best sources of historical data, and the following summary outlines the highlights of their collective account of changes in the general economy of higher education from 1930 to 1972:

1. For the thirty-year period prior to 1960, instructional costs per credit hour grew at an annual rate 2.5 percentage points above the annual increase in the consumer price index (June O'Neill, 20). This excess presumably reflected the labor-intensive nature of higher education as a service enterprise and its consequent inability to offset cost increases by gains in productivity.

2. During the 1960s, Carnegie Commission staff reported that higher education's excess above the growth rate of the CPI increased to 3.4 percentage points, and the Commission was seriously concerned that means be found to reduce the differential to the "historic" excess of 2.5 percentage points as a minimum (5).

3. In Cheit's 1970 study of "the new depression in higher education," the inflation rate for his group of institutions was 3.9 percentage points above the CPI's annual rate of increase, and many of them were having great difficulty finding the additional revenue needed to maintain their programs at a satisfactory level of quality (8).

4. Two years later, Cheit found that the average annual increase in expenditure per student for these institutions was only 0.5 percentage points above the CPI's increase--producing what

> he described as a condition of "fragile stability," but which he thought could not be continued without intolerable impairment of the quality of education in these institutions (9).

The present study has continued, for the period 1972-1975, this type of comparison of inflation in higher education with that in the national economy--using Halstead's Higher Education Price Index (HEPI) as a deflator for educational-and-general expenditures and also comparing its growth rate with that of the CPI. The total ACE sample of institutions was subdivided into the categories proposed by the Carnegie Commission, and by type of control. For the year 1973-74, five of the nine classes of private institutions had negative growth rates in terms of constant-dollar expenditure per FTE student; two of seven classes of public institutions had negative growth rates (i.e., decreases in percentage change in constant-dollar expenditure per FTE student). For 1974-75, all classes of institutions, public and private, had negative growth rates. (It should be noted that if the consumer price index had been used as a deflator, the negative growth rates would have been considerable higher since the CPI increased at a greater rate than the HEPI during both of these years.)

The meaning of "progressive deterioration" as used above in describing the financial condition of higher education should now be clear. What might lie behind the abstract indices of relative decline, in the way of concrete symptoms of "financial distress," may be known through other evidence or may be reasonably inferred; but the specific indicators of "distress" cannot be rigorously deduced or inferred from data of this type. Indeed, one might "logically" defend the following extreme criterion stated by the National Commission on the Financing of Postsecondary Education: "Perhaps the only unequivocal proof of financial distress among educational institutions is their actual demise" (18).

Short of what W.G. Bowen describes as this "draconian test," and including the less stringent but often deceiving criterion of a balanced budget, there is massive evidence of widespread retrenchment in higher education under the impacts during the past three years of the extraordinary combination of soaring inflation with deep recession in the national economy. W.G. Bowen has outlined the main dimensions of these effects, accompanied by examples of institutional adjustments that could be multiplied for most types of institutions in the private and public sectors.[8] And one of the major consequences, the lag in faculty compensation, has been documented by the American Association of University Professors: with a reported monetary increase of 6.4 per cent for 1974-75, "the average faculty member's purchasing power fell by 4.2 per cent" in terms of the Consumer Price Index (1, p. 118).

Returning to the present study, the inflation analyses have shown that private institutions generally have been harder hit than those in the public sector, as indicated by larger negative growth rates in constant-dollar expenditure per FTE student. Within the private sector, comparisons of inflation indices among the nine Carnegie Commission categories show one group that stands out with extremely high negative values for both FY 1974 and FY 1975: Research Universities II (medians of -4.8 and -7.7 per cent decreases in educational and general expenditures per FTE student). These figures represent a

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[8] At the American Council on Education, Carol Van Alstyne and Sharon L. Coldren have just completed a study, soon to be published, that documents the range and magnitude of an essentially new class of cost increases which institutions of higher education have had to meet in recent years. The report will be entitled "The Costs to Colleges and Universities of Implementing Federally Mandated Social Programs."

drastic degree of retrenchment, especially when one considers that half of the institutions in this group suffered greater declines in growth rate than these median values indicate.

Regarding the remainder of the analyses undertaken in this study, comment here will be limited mainly to section VII on the distribution of expenditures by function. Marked differences in distribution pattern were found between private and public institutions, and among the several Carnegie Commission categories within each sector (see Appendix TABLES A-12 through A-19). Despite these differences and the severe inflation-recession pressures, the distribution pattern for each type of institution as a rule remained remarkably stable over the three-year period covered by the study. This constancy of pattern could be described as partly a form of rigidity of priority structure: each major class of functions would continue to receive its proportionate share of the budget, and presumably would be required to make internal adjustments to meet its "deflated-dollar" allocation.

There undoubtedly are other factors contributing to the stability of group allocation patterns--including the possibility that to a large extent the increasingly severe pressures of the past seven years have reduced all of the functional categories to what might well seem to administrators to be residual "bare-bone" levels. But this is a problem that should be examined by individual institutions, and the distribution tables in the Appendix should be useful for comparative purposes in such self-examination. The same is true of various other tables throughout the report showing average revenue or expenditure values by type of institution.

It must be recognized, however, that the fundamental situation of higher education in the national economy, reflected in this report's inflation data and elsewhere, cannot be solved by improved allocation patterns or other managerial devices. Nor will ad hoc efforts to secure special infusions of "aid" from one or another source, even if successful, be likely to have an effect on the basic regressive course of higher-education finance that has been underway for several years. Effective reversal of this trend will depend first of all, of course, on radical change in the inflation-recession conditions that dominate the national economy. Higher education along with all other sectors of society would obviously benefit from improved cost-revenue relationships. But this alone would not solve the special problem of a labor-intensive enterprise that believes its cost increases cannot be offset by productivity gains in the fashion of goods-producing industries--or service industries that can substantially automate their operations--without intolerable impairment of the quality of its educational products.

This strongly held belief needs to be more thoroughly tested through systematic research at several levels. Most needed are intensive case studies of different types of individual campuses, covering all aspects of educational and support operations, from the beginning of what Cheit has called the "new depression in higher education." Howard R. Bowen's current study of liberal arts colleges for the Association of American Colleges is an important step in this direction, needing only to add intensive on-site investigation of educational programs and support operations to illuminate the statistical findings.

Beyond campus-level studies, but related to them, long-term programs of educational, financial, and socio-economic investigation need to be undertaken, focussed upon key aspects of the total system of postsecondary education. Only such efforts--perhaps located partly in a large-scale research institute--seem likely to provide the expertise, the continuity, and the depth of cumulative understanding that will be needed for effective attack upon such problems as these: determination of a desirable and feasible relationship between the economic growth-rate of higher education and that of the nation; the establishment of viable interrelationships between the private and the public sectors of higher education; testing the validity of Howard Bowen's imaginative argument for higher education as a "growth industry" (2); detailed educational and economic analysis of the proposals of the Carnegie Foundation for the Advancement of Teaching in its call for "more than survival" of higher education to the year 2000 and beyond (7).

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APPENDIX

TABLES A-1 to A-19

TABLE A-1: Carnegie Commission's Classification of Institutions, with Corresponding Distributions of the Numbers and Percentages of Institutions for the National (HEGIS) Total and for the Institutions in the ACE Sample Submitting Usable Reports

Type of Institution	National Total[a]				ACE Sample[b]			
	Private		Public		Private		Public	
	No.	%	No.	%	No.	%	No.	%
Research Univ. I	22	1.5%	30	2.3%	12	5.0%	21	13.6%
Research Univ. II	13	0.9	27	2.1	11	4.6	16	10.4
Doctoral Univ. I	19	1.3	34	2.6	13	5.4	23	14.9
Doctoral Univ. II	11	0.7	17	1.3	7	2.9	12	7.8
Compr. U. & C. I	98	6.5	223	17.0	21	8.8	32	20.8
Compr. U. & C. II	47	3.1	85	6.4	14	5.9	8	5.2
Liberal Arts C. I	144	9.5	2	0.1	57	23.9	1	0.6
Liberal Arts C. II	547	36.1	26	2.0	78	32.7	2	1.3
Two-Year Colleges	256	16.9	805	61.3	13	5.4	32	20.8
Specialized Inst.	357	23.5	64	4.9	13	5.4	7	4.6
Total	1,514	100.0%	1,313	100.0%	239	100.0%	154	100.0%

[a]The national figures were taken from the Technical Report of the Carnegie Commission on Higher Education, A Classification of Institutions of Higher Education, 1973. The Commission's source was the fall 1970 enrollment survey (HEGIS) of the National Center for Educational Statistics.

[b]These figures include all of the institutions in the original sample of 646 that submitted usable reports by the "cut-off" date. This total of 393 respondents was reduced to 370 (the total shown in text Table 1) by omitting "Specialized Institutions" and public "Liberal Arts Colleges I and II." All other tables in the report are based on reports from the reduced sample of 370 institutions.

TABLE A-2: Comparison of FTE Enrollment Distribution by Carnegie Commission Categories for ACE Sample and National (HEGIS) Total--Fall Term 1972

Type of Institution	National Total (000)				ACE Sample (000)			
	Private		Public		Private		Public	
	No.	%	No.	%	No.	%	No.	%
Research Univ. I	205.8	12.6%	751.2	14.3%	96.3	16.3%	532.2	33.7%
Research Univ. II	91.8	5.6	444.7	8.4	79.4	13.5	255.2	16.2
Doctoral Univ. I	171.1	10.4	369.6	7.0	95.8	16.2	251.1	15.9
Doctoral Univ. II	50.7	3.1	223.1	4.2	36.3	6.2	165.8	10.5
Compr. U. & C. I	335.4	20.5	1,419.5	26.9	91.8	15.6	243.7	15.5
Compr. U. & C. II	80.7	4.9	272.1	5.2	25.2	4.3	28.7	1.8
Liberal Arts C. I	178.7	10.9	7.9	.2	75.2	12.7	4.6	.3
Liberal Arts C. II	413.5	25.2	46.2	.9	82.1	13.9	4.5	.3
Two-Year Colleges	111.6	6.8	1,735.1	32.9	7.8	1.3	91.0	5.8
Total	1,639.3	100.0%	5,269.4	100.0%	589.9	100.0%	1,576.8	100.0%

TABLE A-3: Educational-and-General (E&G) Expenditures per FTE Student (FTES) for All Institutions (HEGIS Data) Compared with Corresponding Data for ACE Sample, by Carnegie Commission Categories--1972-73

Type of Institution	Private Institutions			Public Institutions		
	E&G Expend. per FTES[a]		"ACE Sample" as % of	E&G Expend. per FTES[a]		"ACE Sample" as % of
	All Insts.[b]	ACE Sample	"All Insts."	All Insts.[b]	ACE Sample	"All Insts."
Research Univ. I	$10,384	$10,741	103.4%	$4,942	$4,877	98.7%
Research Univ. II	5,083	5,465	107.5	3,503	3,428	97.9
Doctoral Univ. I	3,328	4,240	127.4	3,126	3,000	96.0
Doctoral Univ. II	2,570	2,531	98.5	2,288	2,104	92.0
Compr. U. & C. I	2,459	2,272	92.4	2,025	2,145	105.9
Compr. U. & C. II	2,268	2,160	95.2	2,094	2,321	110.8
Liberal Arts C. I	3,239	3,161	97.6	2,993	NA	NA
Liberal Arts C. II	2,367	2,332	98.5	2,787	NA	NA
Two-Year Colleges	1,850	1,904	102.9	1,591	1,519	95.5

[a]Each of the "expenditure per FTE student" values is the median of such figures for the institutions in a given category.

[b]The mean expenditure data for "All Institutions" are based on "HEGIS" surveys conducted by the National Center for Education Statistics. Both enrollment and financial data for the same year were used in the computations, even though collected in two successive survey years. This "matching" of the two types of data follows the practice of the National Commission on the Financing of Postsecondary Education in creating its so-called "Trinst" files. These mean values were derived by summing the total E&G expenditures for each group and dividing this total by the corresponding total number of FTE students.

TABLE A-4: Full-Time-Equivalent Enrollments by Carnegie Commission Categories and Percentage Changes in Group Totals

Type of Institution and Variable	Private Institutions			Public Institutions		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Research Univ. I						
FTE Enrollment	96,278	96,614	97,450	532,215	547,667	553,279
Percentage Change		0.35%	0.86%		2.90%	1.03%
Research Univ. II						
FTE Enrollment	79,355	80,756	81,949	255,211	259,525	262,646
Percentage Change		1.77%	1.48%		1.69%	1.20%
Doctoral Univ. I						
FTE Enrollment	95,813	97,007	98,619	251,144	253,583	255,455
Percentage Change		1.25%	1.66%		0.97%	0.74%
Doctoral Univ. II						
FTE Enrollment	36,302	36,288	36,448	165,824	167,521	168,718
Percentage Change		-0.04%	0.44%		1.02%	0.72%
Compr. U. & C. I						
FTE Enrollment	91,800	92,436	92,637	243,661	243,679	247,202
Percentage Change		0.69%	0.22%		0.01%	1.45%
Compr. U. & C. II						
FTE Enrollment	25,220	24,995	25,008	28,695	27,232	26,951
Percentage Change		-0.90%	0.05%		-5.10%	-1.03%
Liberal Arts C. I						
FTE Enrollment	75,223	76,217	76,345	NA	NA	NA
Percentage Change		1.32%	0.17%			
Liberal Arts C. II						
FTE Enrollment	82,109	80,367	80,060	NA	NA	NA
Percentage Change		-2.12%	-0.38%			
Two-Year Colleges						
FTE Enrollment	7,811	7,597	7,843	91,040	100,678	107,948
Percentage Change		-2.74%	3.24%		10.59%	7.22%
Total	589,911	592,277	596,359	1,567,790	1,599,885	1,622,199

TABLE A-5: Trends in Median Student-Aid Revenues per FTE Student, by Carnegie Commission Categories--Current Dollars

Type of Institution and Variable	Private Institutions			Public Institutions		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Research Univ. I						
Amount/FTE Student	$475	$519	$577	$93	$77	$91
Percentage Change		9.3%	11.2%		-17.2%	18.2%
Research Univ. II						
Amount/FTE Student	314	212	200	98	93	98
Percentage Change		-32.5%	-5.7%		-5.1%	5.4%
Doctoral Univ. I						
Amount/FTE Student	174	190	153	87	86	84
Percentage Change		9.2%	-19.5%		-1.1%	-2.3%
Doctoral Univ. II						
Amount/FTE Student	105	159	177	67	70	66
Percentage Change		51.4%	11.3%		4.5%	-5.7%
Compr. U. & C. I						
Amount/FTE Student	111	105	111	67	67	71
Percentage Change		-5.4%	5.7%		-0-	6.0%
Compr. U. & C. II						
Amount/FTE Student	188	168	134	49	49	47
Percentage Change		-10.6%	-20.2%		-0-	-4.1%
Liberal Arts C. I						
Amount/FTE Student	241	237	224	NA	NA	NA
Percentage Change		-1.7%	-5.5%			
Liberal Arts C. II						
Amount/FTE Student	125	161	143	NA	NA	NA
Percentage Change		28.8%	-11.2%			
Two-Year Colleges						
Amount/FTE Student	156	180	219	25	33	34
Percentage Change		15.4%	21.7%		32.0%	3.0%
Median % Change[a]		9.2%	-5.7%		-0-	3.0%

[a]Each of these values is the median of the percentages above it in the column.

TABLE A-6: Trends in Median Revenues for Auxiliary Enterprises per FTE Student, by Carnegie Commission Categories--Current Dollars

Type of Institution and Variable	Private Institutions			Public Institutions		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Research Univ. I						
Amount/FTE Student	$997	$1,082	$1,120	$640	$725	$687
Percentage Change		8.5%	3.5%		13.3%	-5.2%
Research Univ. II						
Amount/FTE Student	875	971	1,046	722	790	809
Percentage Change		11.0%	7.7%		9.4%	2.4%
Doctoral Univ. I						
Amount/FTE Student	498	537	555	643	663	713
Percentage Change		7.8%	3.4%		3.1%	7.5%
Doctoral Univ. II						
Amount/FTE Student	781	811	883	615	641	674
Percentage Change		3.8%	8.9%		4.2%	5.1%
Compr. U. & C. I						
Amount/FTE Student	652	617	654	424	433	373
Percentage Change		-5.4%	6.0%		2.1%	-13.9%
Compr. U. & C. II						
Amount/FTE Student	789	857	876	540	521	558
Percentage Change		8.6%	2.2%		-3.5%	7.1%
Liberal Arts C. I						
Amount/FTE Student	1,112	1,074	1,174	NA	NA	NA
Percentage Change		-3.4%	9.3%			
Liberal Arts C. II						
Amount/FTE Student	820	854	877	NA	NA	NA
Percentage Change		4.1%	2.7%			
Two-Year Colleges						
Amount/FTE Student	887	933	1,016	102	111	95
Percentage Change		5.2%	8.9%		8.8%	-14.4%
Median % Change[a]		5.2%	6.0%		4.2%	2.4%

[a]Each of these values is the median of the percentages above it in the column.

TABLE A-7: Trends in Median Current-Funds Revenues per FTE Student, by Carnegie Commission Categories--Current Dollars

Type of Institution and Variable	Private Institutions			Public Institutions		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Research Univ. I						
Amount/FTE Student	$15,963	$16,453	$17,346	$6,430	$6,468	$7,168
Percentage Change		3.07%	5.43%		0.59%	10.82%
Research Univ. II						
Amount/FTE Student	7,004	7,573	7,467	4,748	5,091	5,298
Percentage Change		8.12%	-1.40%		7.22%	4.07%
Doctoral Univ. I						
Amount/FTE Student	5,918	6,008	6,120	3,836	4,292	4,333
Percentage Change		1.52%	1.86%		11.89%	0.96%
Doctoral Univ. II						
Amount/FTE Student	3,445	3,956	4,383	3,000	3,188	3,369
Percentage Change		14.83%	10.79%		6.27%	5.68%
Compr. U. & C. I						
Amount/FTE Student	3,352	3,341	3,425	2,741	2,867	3,060
Percentage Change		-0.33%	2.51%		4.60%	6.73%
Compr. U. & C. II						
Amount/FTE Student	3,424	3,744	3,719	2,885	3,167	3,274
Percentage Change		9.35%	-0.67%		9.78%	3.38%
Liberal Arts C. I						
Amount/FTE Student	4,559	5,035	5,173	NA	NA	NA
Percentage Change		10.44%	2.74%			
Liberal Arts II						
Amount/FTE Student	3,582	3,790	3,962	NA	NA	NA
Percentage Change		5.81%	4.54%			
Two-Year Colleges						
Amount/FTE Student	2,942	3,229	3,215	1,743	1,800	1,956
Percentage Change		9.76%	-0.44%		3.27%	8.67%
Median % Change[a]		8.12%	2.51%		6.27%	5.68%

[a]Each of these values is the median of the percentages above it in the column.

TABLE A-8: Median Current Funds Revenues and Current Funds Expenditures per Full-Time-Equivalent Student, by Carnegie Commission Categories

Type of Institution and Variable	Private Institutions			Public Institutions		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Research Univ. I						
Current Funds Rev.	$15,963	$16,453	$17,346	$6,430	$6,468	$7,168
Current Funds Exp.	15,835	16,497	17,351	6,337	6,428	6,983
Research Univ. II						
Current Funds Rev.	7,004	7,573	7,467	4,748	5,091	5,298
Current Funds Exp.	6,985	7,557	7,377	4,617	4,987	5,273
Doctoral Univ. I						
Current Funds Rev.	5,918	6,008	6,120	3,836	4,292	4,333
Current Funds Exp.	5,733	6,032	6,120	3,811	4,107	4,276
Doctoral Univ. II						
Current Funds Rev.	3,445	3,956	4,383	3,000	3,188	3,369
Current Funds Exp.	3,406	3,907	4,274	3,013	3,133	3,306
Compr. U. & C. I						
Current Funds Rev.	3,352	3,341	3,425	2,741	2,867	3,060
Current Funds Exp.	3,321	3,344	3,546	2,681	2,783	3,010
Compr. U. & C. II						
Current Funds Rev.	3,424	3,744	3,719	2,885	3,167	3,274
Current Funds Exp.	3,348	3,581	3,638	2,836	3,166	3,274
Liberal Arts C. I						
Current Funds Rev.	4,559	5,035	5,173	NA	NA	NA
Current Funds Exp.	4,513	5,016	5,229	NA	NA	NA
Liberal Arts C. II						
Current Funds Rev.	3,582	3,790	3,962	NA	NA	NA
Current Funds Exp.	3,413	3,739	3,[illegible]4	NA	NA	NA
Two-Year Colleges						
Current Funds Rev.	2,942	3,229	3,215	1,743	1,800	1,956
Current Funds Exp.	2,944	3,166	3,330	1,657	1,773	1,954

TABLE A-9: Student-Aid Expenditures Minus Student-Aid Revenues, and Ratios of "Deficits" to Expenditures--Private Institutions

Type of Institution and Variable	Current Dollars (Thousands) 1972-73	1973-74	1974-75	Median Dollars/FTE Student 1972-73	1973-74	1974-75
Research Univ. I						
Student-Aid Exp.	$86,727	$87,155	$91,987	$995	$1,037	$1,066
Student-Aid Rev.	-52,170	-54,348	-59,660	-475	-519	-577
S-A "Deficit"	34,557	32,807	32,327	520	518	489
"Deficit"/Expend.	39.8%	37.6%	35.1%	52.3%	49.9%	45.9%
Research Univ. II						
Student-Aid Exp.	42,322	45,666	45,929	636	625	571
Student-Aid Rev.	-22,033	-22,432	-22,391	-314	-212	-200
S-A "Deficit"	20,289	23,234	23,538	322	413	371
"Deficit"/Expend.	47.9%	50.9%	51.2%	50.5%	66.1%	65.0%
Doctoral Univ. I						
Student-Aid Exp.	35,659	36,291	37,256	366	403	353
Student-Aid Rev.	-16,270	-16,832	-15,766	-174	-190	-153
S-A "Deficit"	19,389	19,459	21,490	192	213	200
"Deficit"/Expend.	54.4%	53.6%	57.7%	52.5%	52.8%	56.7%
Doctoral Univ. II						
Student-Aid Exp.	11,279	9,263	10,267	261	249	280
Student-Aid Rev.	-5,300	-5,801	-6,047	-105	-159	-177
S-A "Deficit"	5,979	3,462	4,220	156	90	103
"Deficit"/Expend.	53.0%	37.4%	41.1%	59.8%	36.1%	36.8%
Compr. U. & C. I						
Student-Aid Exp.	25,426	26,539	28,166	265	242	271
Student-Aid Rev.	-12,028	-14,329	-15,869	-111	-105	-111
S-A "Deficit"	13,398	12,210	12,297	154	137	160
"Deficit"/Expend.	52.7%	46.0%	43.7%	58.1%	56.6%	59.0%
Compr. U. & C. II						
Student-Aid Exp.	7,870	7,957	8,102	322	342	330
Student-Aid Rev.	-4,337	-4,145	-3,981	-188	-168	-134
S-A "Deficit"	3,533	3,812	4,121	134	174	196
"Deficit"/Expend.	44.9%	47.9%	50.9%	41.6%	50.9%	59.4%
Liberal Arts C. I						
Student-Aid Exp.	33,804	35,400	38,579	432	445	486
Student-Aid Rev.	-18,611	-19,753	-20,937	-241	-237	-224
S-A "Deficit"	15,193	15,647	17,642	191	208	262
"Deficit"/Expend.	44.9%	44.2%	45.7%	44.2%	46.7%	53.9%
Liberal Arts C. II						
Student-Aid Exp.	27,715	28,025	29,489	327	327	331
Student-Aid Rev.	-12,069	-12,558	-14,114	-125	-161	-143
S-A "Deficit"	15,646	15,467	15,375	202	166	188
"Deficit"/Expend.	56.5%	55.2%	52.1%	61.8%	50.8%	56.8%
Two-Year Colleges						
Student-Aid Exp.	1,353	1,759	2,032	143	180	232
Student-Aid Rev.	-1,009	-1,526	-1,790	-156	-180	-219
S-A "Deficit"	344	233	242	-13	-0-	13
"Deficit"/Expend.	25.4%	13.2%	11.9%	-9.1%	-0-	5.6%

TABLE A-10: Student-Aid Expenditures Minus Student-Aid Revenues, and Ratios of "Deficits" to Expenditures--Public Institutions

Type of Institution and Variable	Current Dollars (Thousands)			Median Dollars/FTE Student		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Research Univ. I						
Student-Aid Exp.	$139,857	$140,181	$140,466	$199	$213	$235
Student-Aid Rev.	-59,212	-56,156	-58,526	-93	-77	-91
S-A "Deficit"	80,645	84,025	81,940	106	136	144
"Deficit"/Expend.	57.7%	59.9%	58.3%	53.3%	63.9%	61.3%
Research Univ. II						
Student-Aid Exp.	39,198	37,715	41,301	148	150	162
Student-Aid Rev.	-30,813	-29,844	-30,832	-98	-93	-98
S-A "Deficit"	8,385	7,871	10,469	50	57	64
"Deficit"/Expend.	21.4%	20.9%	25.3%	33.9%	38.0%	39.5%
Doctoral Univ. I						
Student-Aid Exp.	32,387	33,286	34,965	129	119	120
Student-Aid Rev.	-20,936	-20,562	-22,066	-87	-86	-84
S-A "Deficit"	11,451	12,724	12,899	42	33	36
"Deficit"/Expend.	35.4%	38.2%	36.9%	32.6%	27.8%	30.0%
Doctoral Univ. II						
Student-Aid Exp.	20,193	19,554	19,176	114	100	97
Student-Aid Rev.	-11,365	-12,575	-12,289	-67	-70	-66
S-A "Deficit"	8,828	6,979	6,887	47	30	31
"Deficit"/Expend.	43.7%	35.7%	35.9%	41.2%	30.0%	32.0%
Compr. U. & C. I						
Student-Aid Exp.	23,840	21,581	23,498	100	72	86
Student-Aid Rev.	-16,259	-17,323	-18,295	-67	-67	-71
S-A "Deficit"	7,581	4,258	5,203	33	5	15
"Deficit"/Expend.	31.8%	19.7%	22.1%	33.0%	7.0%	17.4%
Compr. U. & C. II						
Student-Aid Exp.	1,517	941	897	48	49	48
Student-Aid Rev.	-1,450	-933	-891	-49	-49	-47
S-A "Deficit"	67	8	6	-1	-0-	1
"Deficit"/Expend.	4.4%	0.8%	0.7%	-2.1%	-0-	2.1%
Two-Year Colleges						
Student-Aid Exp.	3,689	4,692	5,855	29	37	42
Student-Aid Rev.	-3,350	-4,533	-5,725	-25	-33	-34
S-A "Deficit"	339	159	130	4	4	8
"Deficit"/Expend.	9.2%	3.4%	2.2%	13.8%	10.8%	19.0%

TABLE A-11: Median Educational-and-General Expenditures per FTE Student in Current Dollars and Constant (1963-64) Dollars[a]

Type of Institution and Dollars	Private Institutions			Public Institutions		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Research Univ. I						
Current Dollars	$10,741	$11,265	$12,260	$4,877	$5,005	$5,471
Constant Dollars	6,510	6,393	6,326	2,956	2,841	2,823
Research Univ. II						
Current Dollars	5,465	5,915	5,959	3,428	3,986	4,173
Constant Dollars	3,312	3,357	3,075	2,078	2,262	2,153
Doctoral Univ. I						
Current Dollars	4,240	4,147	4,357	3,000	3,296	3,363
Constant Dollars	2,570	2,354	2,248	1,818	1,871	1,735
Doctoral Univ. II						
Current Dollars	2,531	3,083	3,369	2,104	2,240	2,416
Constant Dollars	1,534	1,750	1,738	1,275	1,271	1,247
Compr. U. & C. I						
Current Dollars	2,272	2,359	2,413	2,145	2,334	2,378
Constant Dollars	1,377	1,339	1,245	1,300	1,325	1,227
Compr. U. & C. II						
Current Dollars	2,160	2,262	2,450	2,321	2,669	2,741
Constant Dollars	1,309	1,284	1,264	1,407	1,515	1,414
Liberal Arts C. I						
Current Dollars	3,161	3,391	3,588	NA	NA	NA
Constant Dollars	1,916	1,925	1,851	NA	NA	NA
Liberal Arts C. II						
Current Dollars	2,332	2,516	2,670	NA	NA	NA
Constant Dollars	1,413	1,428	1,378	NA	NA	NA
Two-Year Colleges						
Current Dollars	1,904	2,029	2,149	1,519	1,645	1,721
Constant Dollars	1,154	1,151	1,108	921	934	888

[a]The deflators for 1972-73 and 1973-74 came from Halstead's unpublished manuscript (January 1975), the indices being 165.0 and 176.3 (1963-74 = 100). The index for 1973-74 was increased by 10 percent to derive an estimated value of 193.9 for 1974-75, which was used in this report to deflate the 1974-75 expenditure data. See Table 15 and the text for Halstead's later revision of the HEPI.

TABLE A-12: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Research Universities I" (Private and Public)

Type of Educational & General Expenditure	Research Univ. I--Private			Research Univ. I--Public		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	31.6%	32.6%	33.3%	37.8%	37.8%	38.2%
Organized Activi .es (Educ.)	11.1	11.1	11.6	5.3	7.2	7.2
Sponsored Research	26.4	25.5	24.5	17.7	16.6	16.1
Other Budgeted Research	.5	.5	.5	4.4	4.2	4.1
Other Sponsored Programs	8.5	7.5	7.5	7.6	7.4	7.2
Extension & Public Service	.9	1.0	1.0	5.5	5.5	5.4
Libraries	4.2	4.1	4.0	3.3	3.4	3.3
Physical Plant O. & M.	7.1	7.7	7.6	8.1	7.9	7.9
Other Educ. & General[a]	9.7	10.1	10.1	10.2	9.9	10.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed.

NOTE: Detail in each column may not add to 100.0% because of rounding.

TABLE A-13: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Research Universities II" (Private and Public)

Type of Educational & General Expenditure	Research Univ. II--Private			Research Univ. II--Public		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	40.1%	40.7%	41.1%	42.7%	41.9%	41.7%
Organized Activities (Educ.)	1.8	1.9	1.9	1.7	1.6	1.6
Sponsored Research	17.9	16.9	16.1	12.1	12.0	11.7
Other Budgeted Research	1.4	1.3	1.2	6.1	5.4	5.6
Other Sponsored Programs	7.3	7.1	6.6	4.3	4.5	4.3
Extension & Public Service	.3	.3	.3	9.9	9.5	9.9
Libraries	3.9	3.8	4.0	3.8	3.7	3.6
Physical Plant O. & M.	8.7	9.5	9.8	8.3	8.2	8.6
Other Educ. & General[a]	18.5	18.5	19.1	11.1	13.2	13.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed.

NOTE: Detail in each column may not add to 100.0% because of rounding.

TABLE A-14: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Doctoral Universities I" (Private and Public)

Type of Educational & General Expenditure	Doctoral Univ. I--Private			Doctoral Univ. I--Public		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	43.4%	43.5%	46.1%	46.4%	45.8%	45.8%
Organized Activities (Educ.)	3.0	2.9	2.9	1.9	1.8	1.6
Sponsored Research	16.6	16.5	14.7	7.1	7.1	6.6
Other Budgeted Research	.1	.1	.1	4.2	4.2	4.2
Other Sponsored Programs	3.1	2.9	3.0	6.9	7.5	7.4
Extension & Public Service	.5	.4	.4	4.6	4.4	4.4
Libraries	3.9	3.9	4.1	4.5	4.5	4.4
Physical Plant O. & M.	9.7	9.2	9.2	10.2	10.3	10.4
Other Educ. & General[a]	19.7	20.6	19.6	14.3	14.4	15.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed.

NOTE: Detail in each column may not add to 100.0% because of rounding.

TABLE A-15: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Doctoral Universities II" (Private and Public)

Type of Educational & General Expenditure	Doctoral Univ. II--Private			Doctoral Univ. II--Public		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	53.6%	52.3%	53.5%	56.9%	55.6%	55.2%
Organized Activities (Educ.)	.5	.5	.6	1.8	1.9	1.9
Sponsored Research	4.8	4.2	4.3	2.5	2.4	2.5
Other Budgeted Research	.1	.2	.2	1.3	1.4	1.4
Other Sponsored Programs	2.3	2.1	1.9	4.2	4.2	4.1
Extension & Public Service	.6	.8	.8	1.3	1.6	1.7
Libraries	5.2	5.1	5.0	4.9	5.3	5.2
Physical Plant O. & M.	11.1	11.0	11.2	12.2	12.3	12.7
Other Educ. & General[a]	21.9	23.8	22.5	14.8	15.3	15.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed.

NOTE: Detail in each column may not add to 100.0% because of rounding.

TABLE A-16: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Comprehensive Universities & Colleges I" (Private and Public)

Type of Educational & General Expenditure	Compr. U. & C. I--Private			Compr. U. & C. I--Public		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	42.4%	41.6%	41.5%	56.0%	55.0%	55.2%
Organized Activities (Educ.)	17.5	17.6	17.5	1.9	2.1	2.1
Sponsored Research	3.7	3.8	3.5	2.4	2.2	2.3
Other Budgeted Research	*[a]	*[a]	*[a]	1.4	1.2	1.1
Other Sponsored Programs	3.7	3.3	3.2	4.1	3.9	3.8
Extension & Public Service	.6	.6	.6	1.3	1.4	1.4
Libraries	3.9	3.8	4.0	4.9	5.0	4.9
Physical Plant O. & M.	9.4	9.7	10.0	11.4	11.8	12.0
Other Educ. & General[b]	18.8	19.6	19.8	16.6	17.3	17.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]Since less than .05 percent of E&G expenditures were reported for these categories, these amounts have been omitted from this table.

[b]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed.

NOTE: Detail in each column may not add to 100.0% because of rounding.

TABLE A-17: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Comprehensive Universities & Colleges II" (Private and Public)

Type of Educational & General Expenditure	Compr. U. & C. II--Private			Compr. U. & C. II--Public		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	45.4%	46.1%	46.8%	56.8%	55.8%	55.3%
Organized Activities (Educ.)	1.7	1.8	1.7	.7	1.3	1.3
Sponsored Research	.8	.6	.8	2.5	2.4	2.3
Other Budgeted Research	*[a]	*[a]	*[a]	.1	.1	.1
Other Sponsored Programs	3.5	3.0	2.3	2.7	2.0	2.1
Extension & Public Service	.5	.4	.4	.7	.8	.7
Libraries	5.1	5.0	5.0	5.7	5.8	5.9
Physical Plant O. & M.	10.7	10.9	11.1	13.2	14.0	14.3
Other Educ. & General[b]	32.4	32.2	31.9	17.6	18.0	18.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]Since less than .05 percent of E&G expenditures were reported for these categories, these amounts have been omitted from this table.

[b]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed.

NOTE: Detail in each column may not add to 100.0% because of rounding.

TABLE A-18: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Liberal Arts Colleges I & II" (Private)

Type of Educational & General Expenditure	Liberal Arts C. I--Private			Liberal Arts C. II--Private		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	43.9%	43.6%	44.1%	44.5%	44.4%	44.6%
Organized Activities (Educ.)	1.9	1.8	1.7	1.8	1.8	1.8
Sponsored Research	2.1	1.7	1.5	.7	.5	.4
Other Budgeted Research	.1	.1	.1	.4	.2	.3
Other Sponsored Programs	2.1	1.9	1.6	2.7	3.0	2.3
Extension & Public Service	.8	.8	.8	.7	.6	.6
Libraries	5.3	5.3	5.4	4.9	4.9	4.8
Physical Plant O. & M.	13.2	13.5	14.0	12.9	12.6	12.9
Other Educ. & General[a]	30.6	31.2	30.8	31.5	31.9	32.2
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed.

NOTE: Detail in each column may not add to 100.0% because of rounding.

TABLE A-19: Percentage Distribution of Educational-and-General Expenditures by Type of Function--Carnegie Commission Category "Two-Year Institutions" (Private and Public)

Type of Educational & General Expenditure	Two-Year Coll.--Private			Two-Year Coll.--Public		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
Instruction & Dept. Research	38.0%	36.3%	36.4%	59.0%	58.1%	56.8%
Organized Activities (Educ.)	4.5	4.7	5.0	.2	.2	.2
Sponsored Research	-0-	-0-	-0-	*[a]	.1	*[a]
Other Budgeted Research	-0-	-0-	-0-	.1	*[a]	.1
Other Sponsored Programs	1.0	.8	.2	3.4	3.4	3.1
Extension & Public Service	.9	.9	1.0	1.4	1.5	1.5
Libraries	4.4	4.5	4.3	4.1	4.2	4.1
Physical Plant O. & M.	13.4	14.9	15.8	12.1	11.9	12.4
Other Educ. & General[b]	37.7	37.9	37.3	19.7	20.5	21.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a]Since less than .05 percent of E&G expenditures were reported for these categories, these amounts have been omitted from this table.

[b]The category "Other Educational and General" includes all expenditures for executive and administrative offices, services to students, staff benefits, and other educational and general purposes not included in the preceding eight categories listed

NOTE: Detail in each column may not add to 100.0% because of rounding.

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